

COUR FÉDÉRALE
FEDERAL COURT
Copie du document
Copy of Document
Déposé / Filed
Reçu / Received

JAN 31 2014

Date _____
Greffe _____
Registrar _____

FEDERAL COURT

No. T-2030-13

BETWEEN:

NEIL ALLARD
TANYA BEEMISH
DAVID HEBERT
SHAWN DAVEY

SERVICE OF A TRUE COPY
HEREOF ADMITTED

THIS...31st...DAY OF

January... 2014...

William F. Paterson

Solicitor for
A.C.C.

PLAINTIFFS

AND:

HER MAJESTY THE QUEEN IN RIGHT OF CANADA

FEDERAL COURT
COUR FÉDÉRALE
JAN 31 2014
JULIA ORCHARD
VANCOUVER, B.C.
DEFENDANTS

AFFIDAVIT OF NEIL ALLARD

I, NEIL ALLARD, Disability pensioner, c/o Conroy & Company, 2459 Pauline Street, Abbotsford, British Columbia, MAKE OATH AND SAY AS FOLLOWS, THAT:

1. I am one of the Plaintiffs herein and as such I have personal knowledge of the matters and facts hereinafter deposed to save and except where same are stated to be made on information and belief in which case I verily believe them to be true.
2. I am 59 years of age, born in 1954 in Winnipeg, Manitoba and reside in Nanaimo, British Columbia. I am 5'11 and only weigh 134 lbs and have been unable to work since 1995. I am recently divorced and have no children or dependents. I have a Bachelor of Social Work degree from the University of Manitoba (1982) and while employed in my career as a social worker I continued to study in evenings at colleges and universities, including the University of Winnipeg and the University of British Columbia, where I had been hoping to complete a Masters degree in social work. Those plans were cut short

when I became ill and could no longer work in 1995. Now produced and marked as Exhibit "A" to this my Affidavit is a copy of my CV comprising 4 pages.

3. I was employed as a counselor with Veteran's Affairs Canada in Vancouver, BC advising veterans on various programs, including disability issues and worked in that capacity for approximately 10.5 years from 1988 when in 1995 I found myself unable to continue working do to my poor health and becoming severely ill. While I made efforts to regain my health unfortunately by 1999 I received a permanent medical retirement on medical grounds through Health Canada. I have been retired and on pension since that time. I currently receive a combination of pensions, including the Canada Pension, a Federal government super annuation pension and a Sun Life Wage Loss Replacement, another Federal government policy. These pensions currently provide me with approximately \$2,700.00 per month after taxes and deductions until age 65, in five years time, at which time my Sun Life wage loss replacement income will come to an end and I will be applying for Old Age Pension. At that time my income will drop to approximately \$24,000.00 per year or \$2,000.00 per month. Now produced and marked as Exhibit "B" to this my affidavit is a copy of the certificate I received thanking me for my 10 years of loyal service to Veterans Affairs Canada, signed on June 19, 1998.

4. In 1995 I was diagnosed by my health care practitioner to have 'Myalgic Encephalomyelitis', a serious neuro-immune disorder affecting every system in my body, as well as clinical depression, which I believe is a life long inherited ailment and while it lifts from time to time it can become disabling particularly in chronically stressful conditions such as having to deal with constant issues over my Authorization to Possess (ATP) Marihuana for medical purposes and my related Personal Production Licence (PPL) with Health Canada.

5. Now produced and marked as Exhibit "C" to this my affidavit is a copy of a one page summary of facts of the nature of my illness.

6. Through trial and error I learned that I had a profound sensitivity to pharmaceutical medications and then on the advice of my health care practitioners, including a specialist, I began using Cannabis (Marihuana) to get some relief from many of the

symptoms I was experiencing. The results were very positive and I was referred to the B.C.Compassion Club Society in Vancouver through a written note of support from my general practitioner in October 1998 at a time when I lived in Vancouver. Now produced and marked as Exhibit "D" to this my affidavit is a copy of the note from Dr. Shintani of October 21st, 1998.

7. By 2001 I found it was costing me about \$500 a month to acquire cannabis (marihuana) as medicine from the Compassion Club and I was not getting the strains and the quality I needed so I realized I would have to grow it myself if I were to continue to benefit from it as it was getting too expensive for me to purchase it and to access it was also difficult as I had very little energy to move around and my nervous system is easily disrupted in crowds or situations involving people and noises.

8. Now produced and marked as Exhibit "E" to this my Affidavit is a copy of Letter from Dr. Leon Berzen, neuropsychiatrist, dated May 1, 2001 supporting my continued cannabis use.

9. Now produced and marked as Exhibit "F" to this my Affidavit is a copy of Letter from Dr. Shintani dated November 5, 2001 confirming I have been a patient of his since January 1996 and endorsing my use of cannabis and indicating the support from the specialist Dr. Berzen.

10. I moved from the Lower Mainland to Nanaimo, BC in September of 2002. I purchased a house there and decided I should try and obtain the appropriate licence through the Health Canada program to provide for my own needs by growing the cannabis for myself. I proceeded to do as much research as I could about growing cannabis (marihuana) so that I could keep my cost down. I took a course through the Continuing Education program at Malaspina College in Duncan, BC entitled "Medical Marihuana Course HEMM001" which started October 15 and completed October 22nd, 2003. The course was conducted by Eric Nash and Wendy Little. This course helped me to navigate the extremely difficult process of applying to participate in the Health Canada program to obtain my Authorization to Possess and my Personal Production

Licence. Now produced and marked as Exhibit "G" to this my Affidavit is a copy of the course offering and Exhibit "H" my registration statement.

11. Now produced and marked as Exhibit "I" to this my Affidavit is a copy of Letter of January 15, 2003 from Dr. Bruce Carruthers indicating his continued support for my use of cannabis.

12. Now produced and marked as Exhibit "J" to this my Affidavit is a copy of my BC Compassion Club Society member renewal from October 29th, 2004 confirming my continued membership with the BC Compassion Club Society in that period of time.

13. I received my first Health Canada authorization to produce cannabis for myself, a Personal Production License (PPL) in 2004 at or in my residence in Nanaimo, BC. At that time I made inquiries to Health Canada about safety issues, inspections and help with seeds and basic growing information, but I received no assistance from them and was advised to simply search the internet for my seeds. I purchased books and seeds and spent hours researching various strains and methods of growing and the equipment needed. I put a lot of time and energy into research and planning and developing knowledge of organic cannabis growing and having a production site built. I invested substantial amounts of money to set up the production site.

14. In 2007 I moved into a house in Lantzville, B.C. and paid for the construction of an indoor production facility and partially paid for the construction of a greenhouse. At that time my wife, was also a medically approved cannabis user, so she and I and one other were able to produce our medicine and share the costs at that location. Being able to produce outdoors in the summer and in a greenhouse during part of the year saved substantially on the overall electrical costs that are primarily incurred when growing indoors.

15. In 2012 I separated from my wife and I moved to my current location in Nanaimo, BC and had a third production site built by professional trades people and it is my current site which is in the basement of my dwelling house and I designed this site for indoor gardening. I spent thousands of dollars having my basement insulated, and two

grow rooms built with professional wiring, insulation, venting and painting. I installed new plumbing, two laundry tubs and a new sewer pump to feed and water my indoor cannabis plants. I had all of the work done by certified electricians and contractors and BC Hydro was notified to inspect completion of all of the electrical work. Now produced and marked as Exhibit "K" to this my affidavit is an electrical inspection report.

16. The warm air from my lights is filtered and used to heat my home during cooler months. The humidity in my home and in my growing rooms is quite dry (under 40%) as I use a wood burning stove for heat on the main level which tends to keep the humidity low overall in my home, so there is no risk of any mould problems. In my vegetative room I use only two four hundred watt light bulbs and for the flowering room I use a maximum of two 600 watt light bulbs. Both rooms are fully insulated, including the walls and ceilings, and the floor in my basement is entirely concrete. There are two canister fans in each growing room for fresh air intake and exhaust air, and both rooms are equipped with two oscillating fans to circulate the air. The fans are controlled by a relay switch to maintain constant temperature and humidity. I also had a large insulated room built in my basement for producing clones and seedlings under a small florescent light and storing dried cannabis, oils and tinctures which I grow and prepare for my own personal use only. I have never had a problem with fire or any concerns about electrical safety because of the professional job done by the electricians.

17. As indicated above, I have grown outdoors and in a greenhouse and found the cost of growing outdoors alongside my spinach, kale, carrots and other herbs and fruit to be almost zero since the soil, compost, water, rain and sunshine are all in place. This is what I was planning to do at my current property. With respect to the public safety risk of break and enters and attempts to steal my plants in production or medicine, I live near the end of a short dead-end street with very low car and pedestrian traffic and I can easily hear and see vehicles or persons coming and going from the area inside my home. I am home nearly all of the time and I have motion detectors at the front and back of my house and all outside doors are kept locked. All three cannabis production related rooms in my basement are equipped with doors which lock and I have both CO2 and smoke alarms in place. My backyard has tall wooden privacy fencing on both sides

between my property and my neighbours. The nearest neighbour's property is 13 feet from my house. My lot is 70.5 ' by 150' which is slightly under one quarter of an acre in size. There are mature fruit trees along the perimeter of my home and a large tall hedge at the rear. I have a small green house on my property and I hope to install another larger one. There are several tall wooden structures to stack firewood, which helps additionally to maintain my backyard privacy. I am allowed to keep up to six chickens on my property, which I may do at some point to lower my living costs, but in particular I hope to be able to have sufficient medicine at a reasonable cost with indoor and outdoor growing at different times of the year.

18. My current dosage of cannabis is authorized at 20 grams per day and the cost of production for all of my needs is approximately \$200-\$300 a month depending upon air conditioning needs, my health and my supply. The costs are mostly for the electrical expenses of running the lights and the air conditioning. I have grown outdoors and in a greenhouse at two of the previous production sites and the cost of growing outdoors is almost zero since the soil, compost, water and sunshine are already in place. I estimate that my total financial cost for all of the equipment and building at the three different sites to be somewhere in the area of \$35,000.00

19. I currently have a viable production site and fully equipped basement which I can continue to produce excellent quality medicine for a nominal cost with no impact on anyone else. I am allowed to produce 98 plants indoors to ensure sufficient yield and variety. Sometimes I become too ill to take care of the plants and they end up dying. I grow organically and the yield on one of my indoor plants is often less than an ounce per plant. My current arrangement allows me to grow suitable strains at the right strength that work for me. I am currently working with 13 different strains. I believe that reasonable regulation and inspection can ensure safety, security and prevent abuse of the program.

20. My method of cannabis use is to vapourize the buds and leaves and I sometimes chew the fresh leaves. I use the leaves and buds for making edible oils and topical oils as well. Many cannabis strains do not seem to work for me and actually worsen some

of my symptoms. I have identified a number of strains which I rotate in my garden which are specific to my needs. I have also been breeding plants and trying new strains. Under the new proposed Regulations I will no longer have access to these strains or to fresh leaves and I would no longer have quality control assurance over my organically homegrown cannabis herbs and fear that my safe access to medical cannabis will be essentially compromised.

21. I cannot afford black market prices including Dispensary or Compassion Club prices estimated at between \$6 - \$12 a gram when I can produce the plant for pennies for my own use. The estimated \$8-\$10 a gram purchase price through Licenced Producers at my current dosage of 20 grams per day would cost me \$200 per day or approximately \$6,000.00 a month or \$72,000.00 a year. On the other hand I can produce this herbal medicine for myself for a fraction of that cost and I have been able to produce it and use it effectively maintaining my own quality controls at a cost of approximately \$200 to \$300 per month. Even at five dollars per gram, it would still cost m \$100.00 per day or approximately \$3,000.00 per month, which is more than my total monthly income.

22. In approximately 6 years from now I will turn 65 years of age and my income will be reduced further as indicated above and I am therefore attempting to ensure my own financial independence and to eliminate all debt and not to incur further debt in having to purchase my medicine. I am unable to receive any imbursement or reimbursement or coverage for cannabis through the Public Service of Canada Extended Health Care plan as it, Cannabis (marihuana) is not considered eligible under that plan. In addition I have learned how to successfully grow cannabis (marihuana) without the use of harmful chemicals and toxicant sprays and control the quality and safety of my medicine and I find the oxygen released by the plants along with the gentle exercise of growing highly therapeutic as well.

23. I have had the continuing support from my attending health care practitioners since 1998 and now attached and marked as Exhibit "L" is a letter dated March 11th, 2008 from Dr. Bruce Carruthers, a specialist in internal medicine indicating his continuing support of my use of medical marihuana since 2003.

24. Now produced and marked as Exhibit "M" to this my Affidavit is a copy of a letter from Dr. Jim Mander, Medical Arts Center dated December 1, 2009 confirming his diagnosis.

25. Now produced and marked as Exhibit "N" to this my Affidavit is a copy of a document describing a Consultation with Dr. K.A. Muendel that occurred on June 11th, 2012 and this report further assesses and documents my condition and the effective use of cannabis (marihuana) for my medical condition.

26. I have consulted numerous specialists, including an anesthesiologist at the Pain Clinic at Nanaimo General Hospital, a psychologist at that Pain Clinic and various others about my situation. My current ability to control the quality of my medicine and ensure a continuous safe supply for myself that is effective, and not be dependent on others producing for me that includes the additional stress of worrying about them getting the strains right and the right organic quality, and getting enough product on time as needed, is the best situation for me and has not and should not have any negative impact on anyone else.

27. I live alone and do not have any pets. I spend a lot my time alone due to my sensitive nervous system. My lifestyle is one of quiet, meditation, healthy, non-western diet, nature, gardening and exercise. I found dealing with Health Canada and its regulations very difficult and exhausting and it gave me constant stress. The proposed new changes and my lack of ability to afford the medicine under the current program with the threat of imprisonment if I produce without a permit, has given me even more substantial anxiety and stress and fear about the future. Every day I wonder how I am going to be able to continue to afford to use organic cannabis (marihuana) of the right strength that works effectively for me. I continue to consult doctors and naturopaths about my medical situation.

28. I do not drink alcohol as I cannot tolerate it and I do not smoke anything including cannabis. I use one pharmaceutical pill Clonazepam (a benzodiazepine) in small amounts along with organic cannabis (marihuana) which is either juiced from the raw plant, eaten in baked goods, used topically in oils and vapourized through a vaporizer or

atomizer. I use the fresh leaves for juicing raw cannabis and dried leaves and female flowers for vapourizing, oils and edibles. I use the safer, cleaner, healthier vapourizing method instead of smoking and have done so for years. The cannabis (marihuana) serves as an antidote to the side effects of the pill I am prescribed which gives particularly negative effects in the morning.

29. Given my documented and medically approved need for 20 grams a day I am concerned about the limits on personal possession of a maximum of 150 grams at any one time as I use it in various different formats and would find it difficult to travel far from my storage site for any period of time if I am limited to 150 grams maximum in my possession at any given time. As indicated I use the plant in its raw form by chewing or juicing the fresh leaves as well as vapourizing dried flowers and leaves and I use them in edibles and topical oils. Under the new regime I understand I would no longer have access to some of these homemade products as I will be limited once again to "dried marihuana" only. I also understand that I will have to destroy any cannabis (marihuana) in whatever form that I have on March 31st, 2014 instead of being able to consume it until it is used up before having to access a Licenced Producer, if I could afford one, which I cannot, based on estimated prices and the prices currently advertised.

30. I am very stressed about the plan to take away my ability to produce my medicine for myself and to be able to control the strains and production site to ensure effective medicine for myself and with no contaminates. In conducting my research I came across an excerpt from the "American Herbal Pharmacopeia" which lists the various chemicals people use in producing marihuana and that I scrupulously avoid and I wish to continue to avoid the use of any such chemicals in the production of my medicine. Now produced and marked as Exhibit "O" to this my affidavit is a copy of excerpts from that document comprising 15 pages in total and the list of chemicals is at page 50 (page 14 of the attachment). Further, I am very concerned that if the court does not enable me to continue to produce for myself that I will be at risk of imprisonment if I continue to do so without a Health Canada licence and will be likely forced to go back to the black market to seek out a black market product that is less expensive than that coming from

licenced producers. Once again this concerns me as to what or how the street cannabis is produced and what it contains and how it might impact upon my health.

31. On September 6, 2012 I applied to Health Canada to amend my production site and increase my dosage. Now produced and marked as Exhibit "P" to this my Affidavit is a copy of that letter.

32. Now produced and marked as Exhibit "Q" to this my Affidavit is a copy of Form B completed by Dr. Mander that supports me, also signed by my specialist Dr. Karl Muendel dated September 6, 2012.

33. Now produced and marked as Exhibit "R" is a copy of my Authorization to Possess approved by Health Canada under my client ID number 23 and MMAD number 1792-13 which is valid until March 31st, 2014, having been issued July 15, 2013 and authorizing me to possess up to 600 grams on my person at any time. I have blacked out my address and mailing address for privacy and security reasons and can make them available to the court or others if required to do so.

34. Now produced and marked as Exhibit "S" to this my affidavit is a copy of my Personal Use Production Licence under the same MMAD ID and client ID number issued July 15, 2013 and expiring on March 31, 2014 and authorizing me to produce 98 plants indoors and to store 4,410 grams indoors. Once again I have deleted my address, mailing address, production site and storage site addresses for privacy and security reasons and will make them available if the court so requires.

35. I swear this Affidavit in support of an Application for an Order under s.24(1) of the *Canadian Charter of Rights and Freedoms* as the appropriate and just interim remedy, in the nature of:

- i. An interim constitutional exemption from ss.4,5 and 7 of the *Controlled Drugs and Substances Act* for all persons medically approved under the *Narcotic Control Regulations C.R.C., c.1041 (NCR)*, the *MMAR* or the *MMPR*, including those patients who have a caregiver 'person responsible' for them designated to produce for them, including an exemption for that caregiver

'person responsible' designated producer, pending trial of the merits of the action or such further Order of the court as may be necessary;

or, alternatively

- ii. an interlocutory exemption/injunction preserving the provisions of the *MMAR* relating to personal production, possession, production location and storage, by a patient or designated caregiver 'person responsible for the patient' and related ancillary provisions, and if necessary, limiting the applicability of certain provisions of the *MMPR* to such patients or designated caregivers that are inconsistent with their s. 7 constitutional right under the *Charter* pending the decision of this Court on the merits of this action.

or alternatively, and together with

- iii. an interim/interlocutory order in the nature of *mandamus* to compel the Defendant to process all applications, renewals and modifications to any licences pursuant to the *MMAR* in accordance with all of its provisions (other than those challenged as unconstitutional herein), notwithstanding ss.230, 233-234, 237-238, 240-243 of the *MMPR* relating to applications under the *MMAR* after September 30th, 2013 as reflected in the amended *MMAR* sections 41-48.

and such further and other relief as the court deems appropriate and just in all of the circumstances.

SWORN BEFORE ME at the City)
of Nanaimo, in the Province of)
British Columbia, this 10th day of)
January, 2014)



A Commissioner for Taking Affidavits in)
and for the Province of British Columbia)



NEIL ALLARD

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

C. V.**Neil V. Allard**[REDACTED],
Nanaimo, B.C.
[REDACTED]

D.O.B. May 25, 1954

This is Exhibit "A" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of January 2014

[Signature]
A Commissioner for Taking Affidavits

for British Columbia
ALBERT E. KING, Q.C.

Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

Education and Training:- **University of British Columbia: 1989- 1990**

Completed a course in Counselling Psychology

I made a preliminary application to the MSW, graduate school program in 1994 and received notice that my entrance requirements were met. Full application was not made due to illness.

- **University of Winnipeg: 1985- 1986 evenings**

Completed a course in Civil Rights & Liberties (Political Studies); and Social Psychology

- **University of Manitoba: 1977- 1981**

Completed Bachelor of Social Work Degree (four year full time study)

- **Vancouver Community College: 1989, evenings**

Completed a course in Counselling Skills;

- **British Columbia Institute of Technology: 1988 fall evenings**

Completed a course in Personnel Management (Administration Dept.)

- **Ministry Of Labour and Consumer Services, Burnaby, British Columbia: June & July, 1988**

Completed an eight session evening series entitled "Substance Abuse Education Program"

- **Alcoholism Foundation of Manitoba: April, 1981**

Completed a full five day program entitled "Prevention and Treatment of Alcoholism"

- **Red River College: Winnipeg, Manitoba; 1987, 1983, 1976-1977, 1974, 1972**

ABC's of Real Estate (winter, 1987)

A/V Media Production Techniques course (fall), 1983

Completed One year full time studies in **Domestic Electronics program; Diploma** received in 1982

Completed Adult basic Education Grade X (1972); XI upgrading courses, 1974

- **Manitoba Department of Education:** June, 1974

Received General Education Development **Grade XII Diploma**

Social Work/ Counselling Employment:

- **Veterans Affairs Canada: 1988- 1999**

Area Counsellor Position: responsible for social, financial, personal, and health related assessments of aging War Veterans in specific geographical areas of metro Vancouver and the Fraser Valley. This involved regular home visits to veterans for assessments, referrals, counselling and necessary follow-up on case planning. As a result of illness, I was off work, on sick leave, as of August 1995, with a subsequent medical retirement in 1999.

- **Ministry of Social Services and Housing:** December, 1987- July, 1988; Auxiliary Position

Social Worker: Maple Ridge, Pitt meadows, Port Coquitlam, and Port Moody areas of Vancouver. Child Protective services and child in care supervision to families and children in and out of care. The position involved child apprehensions, placements, foster home/adoption studies and assessments, juvenile and family court appearances as needed.

- **Child and Family Services of Winnipeg West:** 6 month term position, January - July, 1987

Social Worker: Child Protective services and child in care supervision to families and children in and out of, similar to those mentioned above.

- **North east Winnipeg Family and Child Extended Social Services (N.E.W. F.A.C.E.S.S.)** April 1985- May, 1986

Deployed from the defunct Children's Aid Society.

Social Worker: Child Protective services similar to those above.

- **Children's Aid Society of Winnipeg:** February, 1984- April, 1985,

Social Worker and Supervisor: Authored, developed and implemented an "Independence Living Program", aimed at assisting children in care with a smooth transition to after care at age 18. Completed comprehensive assessments and worked creatively with teens in care, ages 14- 18 towards their independence. Became Supervisor to two social workers as the caseloads expanded with the program's popularity.

The Children's Aid Society became defunct as of April, 1985. I was deployed from there as a generic child protection social worker to N.E.W. F.A.C.E.S.

I also completed my third year social work student placement at C. A. S of Winnipeg in 1980.

- **City of Winnipeg Social Services:** May, 1981- March, 1983

Social Worker: Assessed financial eligibility for social assistance to singles and families. I provided screening, counselling, intake, referral and liaison services to persons with suspected or known alcohol/drug dependence. Made regular home visits to clients and assisted in other capacities for the city emergencies as required.

I also worked as a **Social Worker trainee** in the summer of 1980 while attending the University of Manitoba. I was responsible for review assessments or "re- registration" of all clients who had been on financial assistance for over three months. I also, made comprehensive assessments of the city's care homes, and group homes for the elderly, and the physically and mentally challenged and provided recommendations for improvement.

Other employment:

- **University of Manitoba Instructional Media Centre:** part time, Sept, 1979-April, 1981

Projectionist: Involved setting up and operating film projectors and other audio visual equipment in theaters and classrooms throughout the university campus.

- **Manitoba Liquor Control Commission:** part time and casual while attending University

Involved sales, stock clerk and cashier duties at various liquor stores throughout Winnipeg

- **Canadian Tire:** part time; August, 1977- December, 1979(Pembina Hwy location, Winnipeg)

Hardware sales clerk

- **Swift Canada (Winnipeg):** Jan, 1974- July, 1976

Involved a variety of general plant duties

Other Activities:

I have been actively involved with ownership, rentals, and management of real estate since 1983. I own my own home and property in Nanaimo, B.C. where I have retired.

Volunteer: 1993- 1995

Vice Chair of Strata Council where I resided at 1045 Haro Street, Vancouver, B.C.

This was a 180 unit, apartment building converted from rentals. The building had a commercial strip mall condominium building attached to it which was part of our Strata Corporation.

The entire building required re-plumbing and extensive renovations and upgrades. This strata corporation was filled with challenges of all types. I worked closely with Vancouver Condominium Services and learned a great deal in the process, including firing and hiring new on-site management and strata corporation management companies, active involvement with financial reports and decisions, report writing; running meetings, and handling complaints and disputes.

As young adult, I was employed in several labour and service jobs, including:

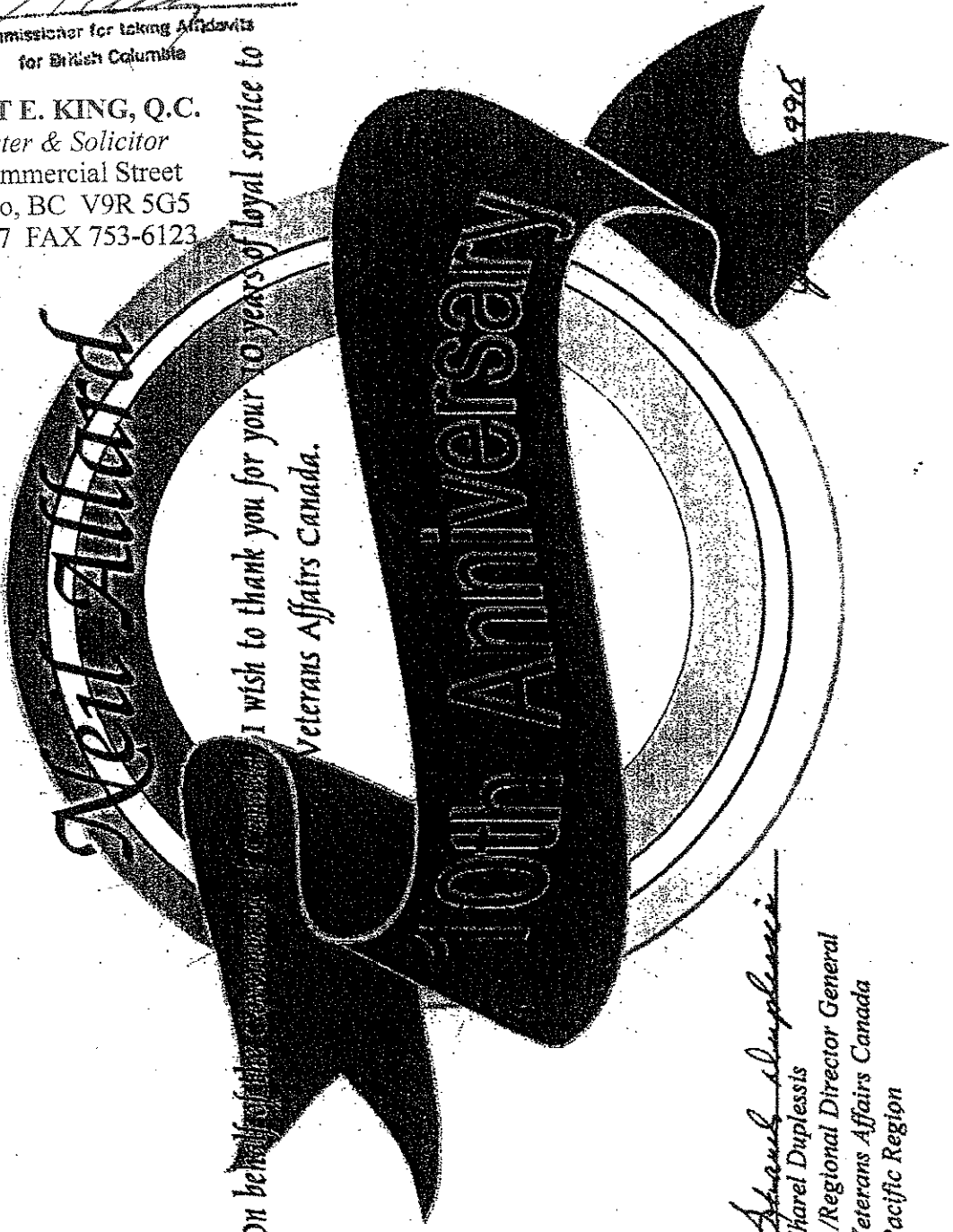
Part time hospital kitchen work, delivery driving, bartending, truck driving (3-5 ton), factory and warehouse work. As a teenager, I was a carrier for a daily newspaper from ages 11- 14.

Although I lived independently from the age of 15, I am a former permanent ward of the Children's Aid Society of Eastern Manitoba, until the age of 18 when I was suddenly completely on my own in Winnipeg. This life experience provided the personal motivation and incentive to pursue a career in Social Work, particularly, child protection and the welfare of children in care.

This is Exhibit "B" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of January, 2014

A Commissioner for taking Affidavits
for British Columbia

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123



On behalf of the Commission I wish to thank you for your 10 years of loyal service to
Veterans Affairs Canada.

Sharel Duplessis
Sharel Duplessis
A/Regional Director General
Veterans Affairs Canada
Pacific Region

The HUMMINGBIRDS' FOUNDATION for M.E. (HFME)
 Fighting for the recognition of Myalgic Encephalomyelitis based on the available scientific evidence, and for patients worldwide to be treated appropriately and accorded the same basic human rights as those with similar disabling and potentially fatal neurological diseases such as Multiple Sclerosis.

A one-page summary of the facts of M.E.

COPYRIGHT © JODI BASSETT JANUARY 2009, UPDATED APRIL 2012, FROM WWW.HFME.ORG



- Myalgic Encephalomyelitis (M.E.) is a disabling neurological disease that is very similar to Multiple Sclerosis (M.S.) and Poliomyelitis. Earlier names for M.E. were 'atypical Multiple Sclerosis' and 'atypical Polio.'
- M.E. is a neurological disease characterised by scientifically measurable post-encephalitic damage to the brain stem. This damage is an essential part of M.E., hence the name M.E. The term M.E. was coined in 1956 and means: my = muscle, algic = pain, encephalo = brain, mye = spinal cord, tis = inflammation. This neurological damage has been confirmed in autopsies of M.E. patients.
- Myalgic Encephalomyelitis has been recognised by the World Health Organisation's International Classification of Diseases since 1969 as a distinct organic neurological disease. M.E. is classified in the current WHO International Classification of Diseases with the neurological code G.93.3.
- M.E. is primarily neurological, but also involves cognitive, cardiac, cardiovascular, immunological, endocrinological, metabolic, respiratory, hormonal, gastrointestinal and musculo-skeletal dysfunctions and damage. M.E. affects all vital bodily systems and causes an inability to maintain bodily homeostasis. More than 64 individual symptoms of M.E. have been scientifically documented.
- M.E. is an acute (sudden) onset, infectious neurological disease caused by a virus (a virus with a 4-7 day incubation period). M.E. occurs in epidemics as well as sporadically and over 60 M.E. outbreaks have been recorded worldwide since 1934. There is ample evidence that M.E. is caused by the same type of virus that causes Polio; an enterovirus.
- M.E. can be more disabling than M.S. or Polio, and many other serious diseases. M.E. is one of the most disabling diseases that exists. More than 30% of M.E. patients are housebound, wheelchair-reliant and/or bedbound and are severely limited with even basic movement and communication.
- *Why are M.E. patients so severely and uniquely disabled?* For a person to stay alive, the heart must pump a certain base-level amount of blood. Every time a person is active, this increases the amount of blood the heart needs to pump. Every movement made or second spent upright, every word spoken, every thought thought, every word read or noise heard requires that more blood must be pumped by the heart.
 However, the hearts of M.E. patients only pump barely enough blood for them to stay alive. Their circulating blood volume is reduced by up to 50%. Thus M.E. patients are severely limited in physical, cognitive and orthostatic (being upright) exertion and sensory input.
 This problem of reduced circulating blood volume, leading to cardiac insufficiency, is why every brief period spent walking or sitting, every conversation and every exposure to light or noise can affect M.E. patients so profoundly. Seemingly minor 'activities' can cause significantly increased symptom severity and/or disability (often with a 48-72 hour delay in onset), prolonged relapse lasting months, years or longer, permanent bodily damage (e.g. heart damage or organ failure), disease progression or death.
 If activity levels exceed cardiac output by even 1%, death occurs. Thus the activity levels of M.E. patients must remain strictly within the limits of their reduced cardiac output just in order for them to stay alive. *M.E. patients who are able to rest appropriately and avoid severe or prolonged overexertion have repeatedly been shown to have the most positive long-term prognosis.*
- M.E. is a testable and scientifically measurable disease with several unique features that is not difficult to diagnose (within just a few weeks of onset) using a series of objective tests (e.g. MRI and SPECT brain scans). Abnormalities are also visible on physical exam in M.E. M.E. is a long-term/lifelong neurological disease that affects more than one million adults and children worldwide. In some cases M.E. is fatal. (Causes of death in M.E. include heart failure.)

This is Exhibit C referred to in the affidavit of Ned Allard sworn before me at Nanaimo BC this 10th day of Jan 2012

[Signature]
 A Commissioner for Taking Affidavits for British Columbia

This paper is included in the new *Caring for the M.E. Patient* book by Jodi Bassett. The book also includes a Foreword by the world's most experienced M.E. expert Dr. Bryan Fryde and is essential reading for anyone with an interest in M.E. For more information on all digital and printed HFME books please visit the HFME Books page on www.hfme.org

www.hfme.org
ALBERT E. KING, Q.C.
 Barrister & Solicitor
 155 Commercial Street
 Nanaimo, BC V9R 5G5
 753-6617 FAX 753-6123

This is Exhibit "D" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo BC
this 10th day of Jan 2014

[Signature]
A Commissioner for taking Affidavits
for British Columbia

753-6617 FAX 753-6123
Nanaimo, BC V9R 5G5
155 Commercial Street
Barrister & Solicitor
ALBERT E. KING, O.C.

Jane Frank, M.D., C.C.F.P.
Joy Russell, M.D., C.C.F.P.
Jessica Shintani, M.D., C.C.F.P.
215 - 2678 West Broadway/
Vancouver, B.C. V6K 2G3

Tel. 736-8151

For NEIL ALLARD
Address _____
Date OCT. 21/98

R
TO THE COMPASSION CLUB -

This is to certify that Neil Allard
has chronic fatigue syndrome. He
was diagnosed to have this condition
since approximately three and one half
years ago.

Any assistance or support you
can provide Neil is greatly appreciated.

Yours sincerely,
J. Shintani, M.D.

DO NOT REPEAT PLEASE LABEL
PERIOD _____ TIMES AT _____ DAY INTER-

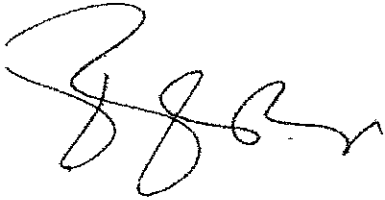
DR. LEON BERZEN
MBBCh, FFPsych(SA), FRCP(C)
Neuropsychiatry

May 1, 2007

To whom it may concern
Re: Mr Neil Allard.

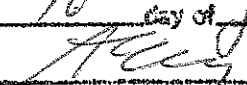
My patient (above named) is currently
applying to Health Canada for his legal
medical use of marijuana.

I believe that his quality of life
is improved by its use.



DR. LEON BERZEN
2255 WESBROOK MALL
VAN. B.C. V6T 2A1

This is Exhibit "E" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, B.C.
this 10th day of Jan 2014


A Commissioner for taking Affidavits
for British Columbia

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

Vancouver Hospital U.B.C. - Site
2255 Wesbrook Mall, Vancouver, B.C. V6T 2A1

Tel: (604) 822-7549

Fax: (604) 822-7105

Janet Franiek, B.Sc., M.D., C.C.F.P.
Joy Russell, M.D., C.C.F.P.
Jessica Shintani, B.Sc., M.D., C.C.F.P.

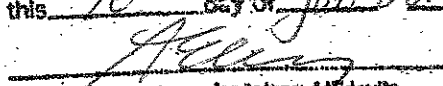
Family Physicians

213 Signature Place
2678 West Broadway
Vancouver, B.C.
V6K 2G3
736-8151

November 5, 2001

To: Health Canada
Re: Neil Allard
d.o.b. May 25/1954

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

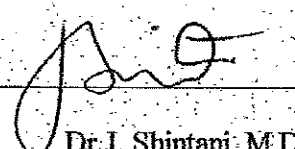
This is Exhibit F referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of Jan 2014

A Commissioner for taking Affidavits
for British Columbia

Mr. Neil Allard has been my patient since January, 1996. He is a former counsellor and social worker and is permanently medically retired from Veterans Affairs Canada due to a complex set of medical problems as indicated by his specialist, Dr. L. Berzen, neuropsychiatrist at U.B.C. Hospital. There is no known cure for his illness.

Dr. Berzen endorses his use of medical marijuana, as I do. It has been quite beneficial for alleviating symptoms and improving his quality of life. Numerous other medications have been tried, as well as several complementary therapies. With most of these, significant side effects limited their use, and those that were tolerated provided little relief of symptoms.

I believe Mr. Allard is responsible with his use of medicinal marijuana.

I trust this information is helpful.


Dr. J. Shintani, M.D.

Healthy Outlooks

Healing Through Energy Psychology

Krisanna Jeffery

Are you overwhelmed? Overworked? Overcharged? Benefit from learning three easy, non-invasive techniques to manage the body's energy and emotions. Learn simple, effective ways to work with your natural ability to heal yourself and to manage chronic pain. This fun, interactive workshop, based on scientific research and energy psychology techniques, teaches ways to de-stress, regenerate, and restore a healthier balance. Counselors and health care providers, as well as the general public, will benefit from this course.

HEEP 001 S04D1 \$76 + GST = \$81.32

1 session: Sat, Mar 20, 9:30am-3:30pm

(1 hour lunch break)

Helping Families Transition Through Separation And Divorce

Wendy Brooks, RSW, M.Ed.

This workshop is intended to develop an understanding of the effects of separation and loss in the family, and to understand the needs of children during the separation and divorce process. By understanding the process, parents are better able to help their children with the emotional difficulties sometimes encountered by families going through stress and change. Using instruction, discussions, and small group exercises, Wendy will cover grief and loss, anger, parental roles, children's needs, and weathering conflict. The goal of the class is to understand how to maintain balance for children during stressful and difficult times. Intended for parents who are experiencing separation and divorce, and others who are interested in the subject.

HEHF 001 S04D1 \$54 + GST = \$57.78

1 session: Sat, Apr 3; 9am-4pm

WEATHER ALERT

Should weather conditions cause course cancellations, listen to local radio stations:

- 89.7 SUN FM Duncan
- 106.9 CHWS FM (The Wolf) Nanaimo
- 88.5 CIBF FM (The Beach) Nanaimo
- 90.5 CBC FM Victoria

for announcements.

Medical Marijuana

Eric Nash and Wendy Little

Government-licensed marijuana growers will show you how to apply for Health Canada's Medical Marijuana Access Program. Topics include patient and grower application forms and plant strain selection for various medical conditions. Wendy Little and Eric Nash are the founders of Canada's leading medical marijuana resource website: www.medicalmarijuana.ca. Their website is noted as a national reference for the Canadian AIDS Society, the Multiple Sclerosis Society of Canada, health professionals, patients, and licensed growers from across Canada and around the world.

HEMM 001 S04D1 \$48 + GST = \$51.36

1 session: Sat, Mar 27; 10am-3pm (1 hour for lunch)

Massage And Relaxation Techniques

Marilyn Swallow

This experiential course will teach you the basic principles of massage and guide you towards confidence in your skills of healing touch. You will learn a variety of techniques, breath work, and tricks of the trade. This hands-on approach guarantees you will be calm and relaxed in no time. Bring 1-2 pillows and a blanket, wear loose clothing and shorts. Couples are encouraged to attend together. Marilyn Swallow has been a registered massage therapist since 1992 and is co-owner of Wellspring Clinic in Duncan.

HEMA 001 S04D1 \$64 + GST = \$68.48

2 sessions: Sat, Apr 3-17; 12noon-4pm

(No class Sat, April 10, 2004)

Angels - We All Have One

Susie Buckley

Through angel directed meditation and focusing practices, discover and enter into a direct dialogue with your "Angels". We all hear what our angels have to tell us, but we don't often recognize the language used in this communication. Here is an opportunity to step out of your usual human confusion, and learn how to ask for reassurance and guidance from your angels.

HEAW 001 S04D1 \$46 + GST = \$49.22

This is Exhibit A referred to in

the affidavit of Neil Allard

sworn before me at Nanaimo, BC

this 10th day of Jan 2004

A Commissioner for Taking Affidavits

San Huetich Columbus

Same course offered

EXHIBIT C ✓



Gillian has been a registered clinical herbalist for 25 years and is currently president of the Canadian Herbarists of B.C. She has been selected to sit on the National Expert Advisory Committee in Ottawa helping to regulate natural health products.

Menopause: The Natural Way

Gillian Levertus, Ph.D. B.H.P.

Hot flashes, mood swings, insomnia, and the blues. Does this sound familiar? Is your quality of life being affected? Do you need hormone replacement therapy? What does perimenopause mean, and what are progesterone and estrogen? Let Gillian answer your menopausal concerns, and take a look at how you can gain the knowledge to manage menopause gracefully with herbal medicine, nutrition, and lifestyle changes.

HEMT 001 S04D1 \$30 + GST = \$32.10

1 session: Mon, Apr 5; 6:30-8:30pm

Acupressure For Dogs

Michael Lines, D.T.C.M.

Learn a gentle acupressure routine to relax and energize your dog, and acquire the knowledge to keep your animal healthy. The class will be particularly helpful for those of you with older dogs that may have osteoarthritis, hip dysplasia, or spinal problems. Bring your dog and a blanket.

HEAF 001 S04D1 \$49 + GST = \$52.43

1 session: Sat, Apr 24; 9-12noon

165372

12-SEP-2003 12:08

ALLARD NEIL V
539-055-681
527D

Program: CES
2003-10-15 to 2003-10-22

ALLARD NEIL V
NANAIMO, BC

MALASPINA UNIVERSITY COLLEGE
PAID

SEP 12 2003

COWICHAN CAMPUS

Home (250) 741-0009
Bus. (250) 000-0000 L0000

<= Correspondence will be sent to this address

Charged to new 15/03

HEMM 001 P03D1 MEDICAL MARIJUANA
Starts: 15-OCT-2003 Ends: 22-OCT-2003
Duncan
Wed 19:00-21:00

\$48.00



Paid 2003-09-12 Visa \$51.36

Tuition \$48.00
Goods and Services Tax + \$3.36
Paid to Date - \$51.36

Processed by: NK/51.36 VISA

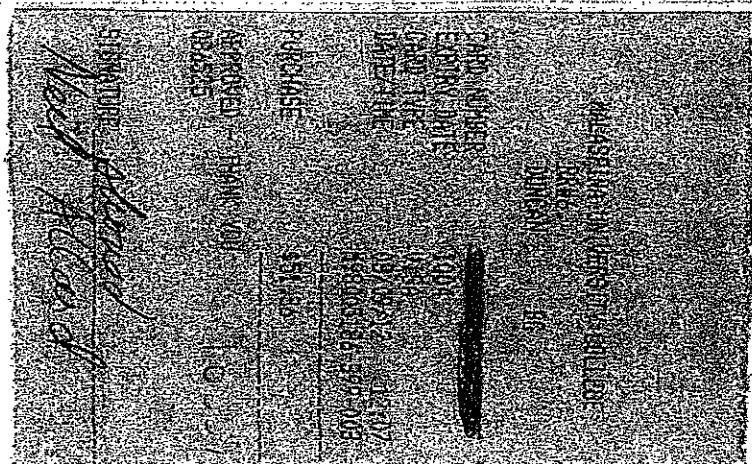
Enrolment No: 5390-5568-019 (I) 569085 Net Payable ==> \$0.00

www.mala.ca

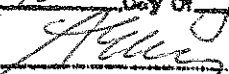
This is Exhibit "H" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of Jan 2004

[Signature]
A Commissioner for Taking Affidavits
for British Columbia



ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123



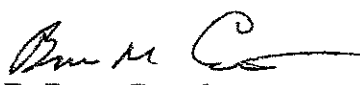
ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

This is Exhibit "I" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of Jan 2014

A Commissioner for taking Affidavits
for British Columbia

To Whom It May Concern:

Re: Mr. Neil Allard

Nanaimo, B.C.


After lengthy unsuccessful trials with various prescription medications, along with other therapies for Mr Allard's complex medical condition, I conclude that the use of medical marijuana for this patient is warranted and recommended as part of his overall therapy.


Dr Bruce Carruthers
Internal Medicine

Jan 15/03

BC COMPASSION CLUB SOCIETY



Renewal Date: Oct 29 - 2004 Member #

Name: Neil Allard

Signature: [Handwritten Signature]

The bearer of this is a member of the Compassion Club of Vancouver, BC. This card entitles members to purchase cannabis and obtain access to other natural therapies. Membership is renewable yearly, and revocable at any time, at the discretion of the Club.

2995 Commercial Drive, Vancouver, BC V5M 4C8 604. 875. 0448
www.thecompassionclub.org

This is Exhibit "J" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo BC
this 10th day of Jan 2014
[Signature]

A Commissioner for taking Affidavits
for British Columbia

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123



505 - 6th Street, Suite 200
New Westminster, BC V3L 0E1

Toll Free: 1-866-566-SAFE
Fax: (778) 396 - 2064
www.safetyauthority.ca

ELECTRICAL INSPECTION REQUEST

Electrical Contractor Installation Permit		
Inspection Requested : 06 Sep 2012	AREA # 663	Permit/Product Approval # 5238678

Issue Date : 2012/09/06

Expiry Date: 2013/03/05

Installation Name: Neil Allard

Suite/Location:

Installation Address: NANAIMO-MAKI RD/10TH ST N

Contact Phone Number: 2507166442

Directions:

I, HEMMERICH, ROLAND (FSR # 34363) a Field Safety Representative for ROLAND HEMMERICH DBA ROLAND ELECTRIC (Contractor # 15592) have physically examined the electrical work completed under the above-mentioned permit, and hereby certify that the electrical installation authorized thereby has been installed to comply with the Safety Standards Act and Regulations of British Columbia.

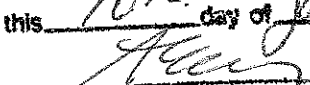
Rough Wiring Inspection Required

- Rough Wiring as noted below may be covered on : 2012/09/08
- Rough Wiring Progress : Complete
- Partial Rough Wiring Area :

Electrical Service is Ready for Connection

- Main Electrical Service connection is required as follows : Service Change
- Service Change From : 70 To : 100
- Type of Grounding Electrode: Plate,

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

This is Exhibit - K referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of Jan 2014

A Commissioner for taking Affidavits
for British Columbia

Signature of Field Safety Representative

Contractor Phone Number

2507166442

Date

SEPT 21/12

Voltage

240

Amps

100

Phase

1

Electric Heat

kw

March 11, 2008

Dr. Bruce Carruthers
2-3657 west 16th Ave.
Vancouver, B.C.
V6R 3C3

DR. BRUCE CARRUTHERS
#2 - 3657 West 16th Ave.
Vancouver, B.C. V6R 3C3
604-224-1515 MSC #1316

To Health Canada:

Re: Mr. Neil Allard (DOB, May 25, 1954)
Use of medical marijuana

Further to my letter dated January 15, 2003, I am continuing to recommend ten grams daily of medical marijuana for Mr. Allard's medical condition of myalgic encephalomyelitis. He was diagnosed with this in 1995. There is no known cure for this condition and current therapies are highly individual.

He has had lengthy unsuccessful trials with numerous conventional medications which have caused intolerable side effects and worsened his overall state. His condition has been stable and his quality of life improved with his present therapies, which include medical marijuana in vapor, tea and baked forms.

He grows his own organic marijuana, which provides him an opportunity to exercise gently, obtain warmth and light and the benefits of year round gardening, as well a sense of control over managing his illness, which is critically important to this highly independent man.

I shall be retiring from medical practice shortly and this will leave Mr. Allard in the predicament of not having a specialist's signature required for his Health Canada medical marijuana forms. **I understand that this is not required for all conditions**, and that the general practitioner is allowed to sign the Health Canada medical marijuana forms for certain conditions.

Mr. Allard has been growing legally for almost four years, his case is well documented, he has written support from his Member of Parliament, and this yearly application process clearly causes him a great deal of stress, which tends to worsen his overall chronic condition.

In view of this, **I recommend that his subsequent applications to Health Canada's medical marijuana program be signed by his general practitioner, without the need for a specialist's signature.**


I trust this clarifies the matter.

Sincerely,



Dr. Bruce Carruthers, M. D.
Internal Medicine

This is Exhibit "L" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, B.C.
this 10th day of Jan 2008



A Commissioner for taking Affidavits
for British Columbia

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

The Medical Arts Centre

PORT PLACE • UNIT 30 - 650 SOUTH TERMINAL AVENUE • NANAIMO, BC • V9R 5E2

TELEPHONE: (250) 753-3431 FAX: (250) 754-6897

FAMILY PHYSICIANS

A.C. Baird Inc., M.B. Ch.B., C.C.F.P.
Anthony P. Lane Inc., M.B., B.Ch., C.C.F.P., F.C.F.P.
Robin R. Love Inc., B.Sc., M.D., C.C.F.P.
D.A. Kazanowski Inc., M.D.
Ian D. Montgomery Inc., B.Sc., M.D.
B.C. Calvin Inc., B.Sc., M.D., C.C.F.P.
R. Keith Phillips, B.Sc., M.D., C.C.F.P., F.C.F.P.

Neil Rogers, B. Sc., M.D.
Renier J. van Rensburg Inc., M.B., Ch.B.
J.A.C. O'Farrell Inc., Hons. B.Sc., M.D., C.C.F.P.
Allan R. Kaban Inc., (PHARM), M.D., C.C.F.P.
J.S. Mander, M.B. Ch.B.
Clive Balfour Inc., M.B. Ch.B., F.C.E.M.
Paul Langer, M.B., Ch.B.

ADMINISTRATION

Gregory P. Simmons

December 1, 2009

To Whom It May Concern:

RE: Neil ALLARD
DOB: May 25, 1954

Mr. Allard suffers from myalgic encephalomyelitis. He is an infrequent attender to my practice as he has fluctuating periods of debilitating fatigue and as a result, he struggles with basic activities of daily living. He also tells me that noise in the form of television, stereos, telephones, voices and crowds can sometimes severely affect his condition.

Due to the nature of his condition, he is also unable to perform instrumental activities of daily living and for these, he relies on his wife. When he does have severe attacks, he struggles with his memory and cognition and so help from his wife is a necessity.

Recuperation from severe attacks can take hours to sometimes even days. The pain element of his condition affects his walking requiring numerous rest periods during walks and the need for significant rest upon returning home. His symptoms have now been present for several years.

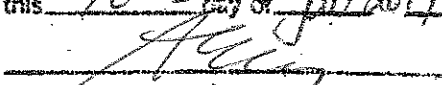
He has been assessed over the years by several specialists and it has been well documented that his condition is chronic.

Yours sincerely,


Jim Mander, M.D.

JM/wlw

BERTE E. KING, O.C.
Barrister & Solicitor
55 Commercial Street
Nanaimo, BC V9R 5G5
604-661-6117 FAX 753-6123

This is Exhibit "M" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of June 2014

A Commissioner for taking Affidavits
for British Columbia

Name: Allard, Neil
MRN: 09480989
ENC#: 92008807879
DOB: 25-May-1954
GENDER: Male
PHN: 9105-971-371

C o n s u l t a t i o n

Document Name: Anaesthetic Consult
Dictated By: Muendel, Karl Alexis
Result Date/Time: 11-Jun-2012 13:58

Your patient, Neil Allard, was seen today at Nanaimo Regional General Hospital. He is a 58-year-old gentleman who was referred for assessment and treatment of neuropathic left supraclavicular pain. He has a history of nonunion of his left clavicle after a fracture that occurred when he was about 10 years old. He has had this evaluated by a number of surgeons in the past, and has considered having surgery. Recently, the pain seems to have been increasing. He has very significant sensitivity over this area, and has a difficult time having contact even with clothing over it. He had mentioned to Dr. Smith, and I read this from his note, that he had a previous fear of doctors and therefore stayed away from surgery. When he had discussed this with Dr. Smith, they decided to hold off on surgery, and they wanted to deal with the hypersensitivity component.

Today, the patient presents with primarily total body pain. This encompasses his entire trunk, anterior and posterior, his limbs, anterior and posterior, and his head circumferentially. He was diagnosed with what is called myalgic encephalomyelitis by Dr. Carruthers who had written guidelines for this. The symptoms seem to vary greatly, but can involve pain throughout the entire body. The patient presents with some literature on the subject today. Of note, I am not familiar with this pathology, and so spent a great deal of time trying to figure out what his symptoms were. It seems as though he has a very hyperacute nervous system that seems to flare with multiple different stimulations. He has abdominal issues, gastrointestinal issues with food. He is extremely cold. He keeps his house at 85 degrees Fahrenheit. He describes aching pain and sharp pain throughout his body. He describes weakness, numbness, multiple bowel movements per day, 5 or more. He urinates a lot. He mentions any activity seems to flare his pain. He has a considerable amount of thoracic and lumbar back pain which limits him from even supporting his own weight in the sitting position. If he lies back, he can sit there for approximately 20 minutes until he has to stoop forward. He really has not gained much benefit from anything except for organic cannabis. He mentions that he uses 9 different types, and he vaporizes them. He has had a license for 9 years now. When asking him what cannabis does for him, he mentions it helps with muscle and joint pain, headaches, sleep, relaxation, appetite, ringing in his ears, depression, energy level and creativity.

Of note, he has a history according to him of some sort of meningitis as a child which resulted in memory impairment and some sort of brain injury.

Worst level of pain is 8/10, best is 3/10, acceptable is 3/10.

MEDICATION TRIALS:

This is Exhibit "M" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo BC
this 10th day of June 2014
Alexis
A Commissioner for taking Affidavits
for British Columbia

Pt. Loc: Nanaimo Regional General Hospital - Acute Care
Print Date: 16-Oct-2012
Print Time: 10:26
Discharge Date: 11-Jun-2012
EHR Printed Copy
Page 1 of 3

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

Name: Allard, Neil
MRN: 09480989
ENC#: 92008807879

C o n s u l t a t i o n

Document Name: Anaesthetic Consult
Dictated By: Muendel, Karl Alexis
Result Date/Time: 11-Jun-2012 13:58

He mentions a very long list of neuropathic medications, antidepressants, all which resulted in intolerance. Clonidine, ranitidine, baclofen, Imitrex, codeine, Paxil, amitriptyline, nortriptyline, Ativan, Zoloft, Neurontin, topiramate, propranolol, Flexeril, Synthroid, Prozac, Robaxacet, Dicetel, Wellbutrin, Effexor, nabilone, diphenhydramine.

Current medications include clonazepam and organic cannabis.

ALLERGIES:

He lists almost all these medications as allergies.

PREVIOUS TREATMENTS:

He has not had any injections and does not want any. Acupuncture was somewhat helpful for short-term. Hypnosis – has tried to use it. Relaxation training is very helpful. Counseling is very helpful. Physical therapy is not tried. Massage was helpful.

PAST MEDICAL HISTORY:

Insomnia, and he mentions a bifid left rib as a medical problem.

PAST SURGERIES:

Procedure to enlarge his bladder at age 11. Hydrocele repair in 2011.

SOCIAL HISTORY:

He quit after age 27 and drank moderate alcohol until 1995 when his changes of ME appeared. This was in 1995. History of depression, anxiety, suicidal thoughts. Previously, he worked for Veterans Affairs as a counselor and social worker, but since 1995, has not been able to work due to this quite debilitating problem.

MRI of his brain which shows small white matter changes not indicative of demyelination throughout his superficial cortex.

PHYSICAL EXAMINATION:

He is alert and oriented. He is cooperative. He is very slow in his movements and in his response to certain questions, but is quite pleasant. He appears quite gaunt and is dressed very warmly for the day. Vital signs: Pulse of 90, blood pressure 130/83, saturating 98% on room air. Weight is 62.4 kg, height is 179 cm, BMI is 19.3. He is able to heel walk, toe walk and squat, but all these motions produce pain. He is able to support himself in the sitting position for a short period of time until his back pain is exacerbated. Extension exacerbates his thoracic and lumbar pain more than flexion but then flexion does after a short period of time as well. He has good strength in his lower extremities. Neurologically, he appears intact with no long tract signs and no focal deficits. He has got well-perfused extremities, upper and lower. No significant rashes or excoriations. He has got no significant deformities and no step-offs in his spine.

Name: Allard, Neil
MRN: 09480989
ENC#: 92008807879

C o n s u l t a t i o n

Document Name: Anaesthetic Consult
Dictated By: Muendel, Karl Alexis
Result Date/Time: 11-Jun-2012 13:58

ASSESSMENT:

This is a pleasant 58-year-old gentleman with a history since 1995 of total body pain that was diagnosed by Dr. Carruthers as myalgic encephalomyelopathy. This is thought to be due to possible small vascular occlusions that can be body wide. It was noted that this has previously been diagnosed as atypical multiple sclerosis or atypical post-polio syndrome.

PLAN AND RECOMMENDATIONS:

Unfortunately, we do not have any further medication trials since he has been through a number and would like to defer any further medications. We discussed interventions, but obviously due to his widespread pain, he would not be a candidate for many of these and he would like to avoid injections if at all possible.

We discussed physical therapy options. Unfortunately, I would have him work on lumbar stabilization. He is unable to support himself and even the walk in the hospital may flare his pain. Therefore, we decided to avoid this. Aqua therapy was a consideration, but the cold is too much for his body, can actually flare his pain.

We will have him see our social worker and hopefully our psychologist in the future to continue to work with coping strategies. I understand he is seeing a psychologist about 7 times per year which does seem to benefit him.

Hopefully, this is of some benefit to you. If you have any questions or concerns, please do not hesitate to contact me.

THIS DOCUMENT HAS BEEN
DICTATED BUT NOT READ:

Dr. Muendel, Karl Alexis
D: 11-JUN-2012 13:58 T: 18-JUN-2012 06:25 MW 24741

cc: Dr Mander, Jatinder Singh
cc: Dr Smith, Erasmus J

American Herbal Pharmacopoeia®

Cannabis Inflorescence Cannabis spp.

Editors and Technical Advisors

Roy Upton RH DAYU
American Herbal Pharmacopoeia®
Scotts Valley, CA

Lyle Craker PhD
University of Massachusetts
Amherst, MA

Mahmoud ElSohly PhD
University of Mississippi
University, MS

Aviva Romm MD CPM
American Herbal Pharmacopoeia®
Lennox, MA

Ethan Russo MD
GW Pharmaceuticals
Salisbury, UK

Michelle Sexton ND BS
Americans for Safe Access
Washington, DC
The Center for the Study of Cannabis
and Social Policy
Seattle, WA

Research Associates
Jahan Marcu PhD
Green Standard Diagnostics
Henderson, NV

Diana Swisher MA
American Herbal Pharmacopoeia®
Scotts Valley, CA

STANDARDS OF IDENTITY, ANALYSIS, AND
QUALITY CONTROL

PREVIEW OF COMPLETE MONOGRAPH
PH 64 PAGES

This is Exhibit "0" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo BC
this 10th day of Jan 2014

Albert E. King
A Commissioner for taking Affidavits
for British Columbia

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5



TABLE OF CONTENTS

Nomenclature	2	Constituents	32
Botanical Nomenclature			
Botanical Family			
Pharmaceutical Nomenclature		Analytical	40
Pharmacopoeial Definition		Thin-Layer Chromatography (TLC)	
Common Names		High Performance Liquid Chromatography (HPLC)	
		Gas Chromatography with Flame Ionization Detection (GC-FID)	
Identification	2	Limit Tests	
Botanical Identification		Foreign Organic Matter	
Macroscopic Identification		Total Ash	
Organoleptic Characterization		Acid-insoluble Ash	
Microscopic Identification		Loss on Drying	
		Pesticide Limits	
Commercial Sources and Handling	18	Microbial and Fungal Limits	
Sourcing		Metal Limits	
Cultivation		Solvent Residues	
Harvest			
Drying		International Status	51
Packaging			
Storage		References	55
Natural Contaminants and Adulterants			
Qualitative Differentiation			
Sustainability and Environmental Impact			
Documentation of Supply			
Growing and Harvesting Guidelines			
Security			
Suppliers and Dispensaries			

PREVIEW OF COMPLETE MONOGRAPH
 COMPLETE MONOGRAPH 64 PAGES

Legal Notification

The following Standards of Identity, Analysis, and Quality Control of *Cannabis* are intended to provide scientifically valid methods for the analysis of cannabis and its preparations that can be used to comply with state and federal regulations and policies. The analytical methods were obtained from peer reviewed literature, have been used as part of international or federal monitoring programs for cannabis, and have been verified for their scientific validity. Methods other than those presented in this monograph may be scientifically valid and provide reliable results. However, all methods must be verified as being scientifically valid prior to use for regulatory compliance.

In the United States, cannabis is a Schedule I controlled substance under federal law; therefore, any use or possession of cannabis and its preparations is illegal except pursuant to the compassionate use Investigational New Drug exemption. These standards are not intended to support, encourage or promote the illegal cultivation, use, trade, or commerce of cannabis. Individuals, entities and institutions intending to possess or utilize cannabis and its preparations should consult with legal counsel prior to engaging in any such activity.

The citing of any commercial names or products does not and should not be construed as constituting an endorsement by the American Herbal Pharmacopoeia. Additionally, the reliability, and therefore ability to comply with state or federal regulations, of any conclusions drawn from the analysis of a sample is dependent upon the test sample accurately representing the entire batch. Therefore, when performing all analytical tests, a formal sampling program must be employed.

Authors

Botanical Identification

Mahmoud ElSohly PhD
Suman Chandra PhD
Hemant Lata PhD
University of Mississippi
University, MS

Macroscopic Identification

Suman Chandra PhD
Hemant Lata PhD
Mahmoud ElSohly PhD
University of Mississippi
University, MS

Microscopic Identification

Suman Chandra PhD
Hemant Lata PhD
Mahmoud ElSohly PhD
University of Mississippi
University, MS

Elizabeth Williamson PhD
University of Reading
Reading, UK

Commercial Sources and Handling

Suman Chandra PhD
Hemant Lata PhD
University of Mississippi
University, MS

Roy Upton RH DAyu
American Herbal Pharmacopoeia
Scotts Valley, CA

Constituents

Mahmoud ElSohly PhD
Desmond Slade PhD
University of Mississippi
School of Pharmacy
University, MS

Analytical

Thin-Layer Chromatography (TLC)
Gas Chromatography (GC)
Mahmoud ElSohly PhD
Desmond Slade PhD
Mohammed M Radwan PhD
University of Mississippi
University, MS

High Performance Liquid Chromatography (HPLC)
Kong M Li PhD
University of Sydney
Sydney, NSW

Reviewers

Wendy Applequist PhD
Missouri Botanical Gardens
St. Louis, MO

Paula Brown PhD
British Columbia Institute of
Technology (BCIT)
British Columbia, Canada

Rudolf Brenneisen
University of Bern
Bern, Switzerland

Mike Corral
Wo/Men's Alliance for Medical
Marijuana
Santa Cruz, CA

Staci Eisner
Cannabis Committee
American Herbal Products
Association
Silver Spring, MD

Daniel Harder PhD
Museum of Natural History
Santa Cruz, CA

Erik W Johansen
Special Products Registration
Program Coordinator

Washington State Department of
Agriculture
Olympia, WA

James Kababick
Flora Research Laboratories
Grants Pass, OR

ao Prof Dr Liselotte Kren
University of Vienna
Vienna, Austria

Prof Dr Reinhard Länger
AGES Pharm Med
Vienna, Austria

Etienne de Meijer
GW Pharmaceuticals
Salisbury, UK

David Potter PhD
GW Pharmaceuticals
Salisbury, UK

Eike Reich PhD
CAMAC
Muttentz, Switzerland

Jeanette Roberts PhD, MEd
University of Wisconsin
Madison, WI

Steph Shaffer
American for Safe Access (ASA)
Washington, DC

Neil Schoenbaum, MD
Finn Branches University
Santa Cruz, CA

Amal Subramanyam PhD
Oregon Health and Science
University
Portland, OR

Elan Sudberg
Costa Mesa, CA

Elizabeth Williamson PhD
University of Reading
Reading, UK

Hugh Watson
Marijuana Agricultural Chemical
Specialist
Washington State Liquor Control
Board
Olympia, WA

Final Reviewers

Giovanni Appendino Laurea
Department of Pharmaceutical
Sciences
University of the Eastern Piedmont
Novara, Italy

Vincenzo Di Marzo PhD
Endocannabinoid Research Group
(EGR)
Institute of Biomolecular Chemistry
(ICB)
Consiglio Nazionale delle Ricerche
(CNR)
Potenza (NA), Italy

Raphael Mechoulam PhD
Hebrew University of Jerusalem
Jerusalem, Israel

Jonathan Page PhD
National Research Council
Saskatoon, Canada

Ethan Russo MD
GW Pharmaceuticals
Salisbury, United Kingdom

Maged Sharaf PhD
American Herbal Products
Association
Silver Spring, MD

Michael Steenhout
Washington State Liquor Control
Board
Olympia, WA

ISBN: 1-929425-33-3 ISSN: 1538-0297

© 2013 American Herbal Pharmacopoeia®
PO Box 66809, Scotts Valley, CA 95067 USA

All rights reserved. No part of this monograph
may be reproduced, stored in a retrieval system,
or transmitted in any form or by any means with-
out written permission of the American Herbal
Pharmacopoeia®.

The American Herbal Pharmacopoeia® is a
nonprofit corporation 501(c)(3). To purchase
monographs or botanical and chemical refer-
ence standards, contact the American Herbal
Pharmacopoeia® • PO Box 66809 • Scotts Valley,
CA 95067 • USA • (831) 461-6318 or visit the AHP
website at www.herbal-ahp.org.

Medical Disclaimer

The information contained in this monograph
represents a synthesis of the authoritative scien-
tific and traditional data. All efforts have been
made to ensure the accuracy of the information
and findings presented. Those seeking to utilize
botanicals as part of a health care program should
do so under the guidance of a qualified health care
professional.

Statement of Nonendorsement

Reporting on the use of proprietary products
reflects studies conducted with them and is not
meant to be a product endorsement.



American Herbal Pharmacopoeia®

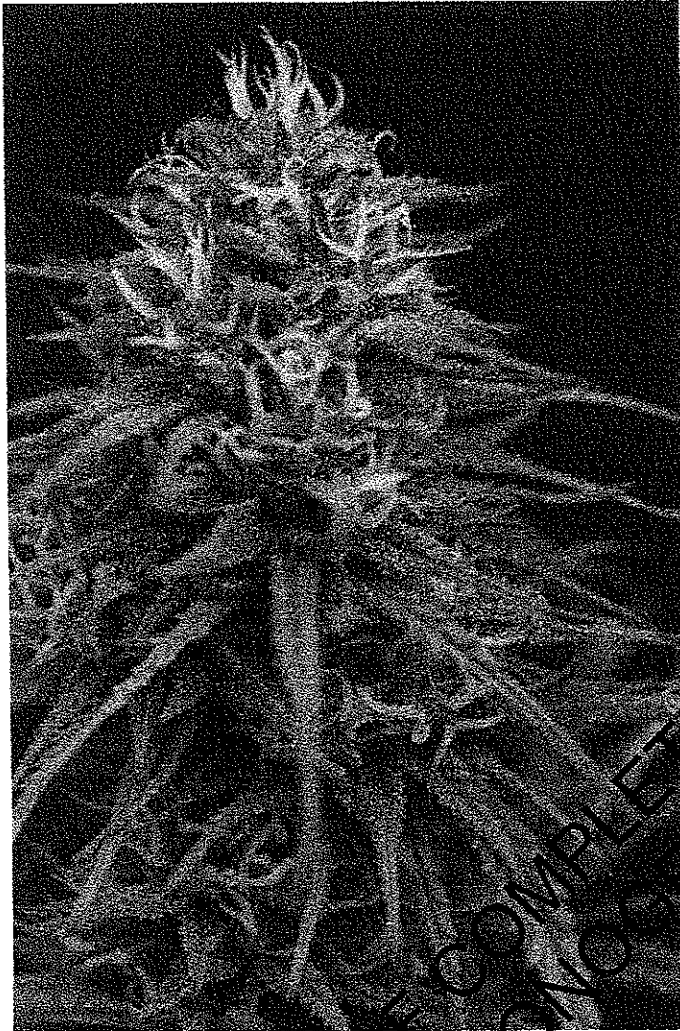
PO Box 66809
Scott's Valley, CA 95067
831-461-6318
www.herbal-ahp.org
ahp@herbal-ahp.org

Design & Layout

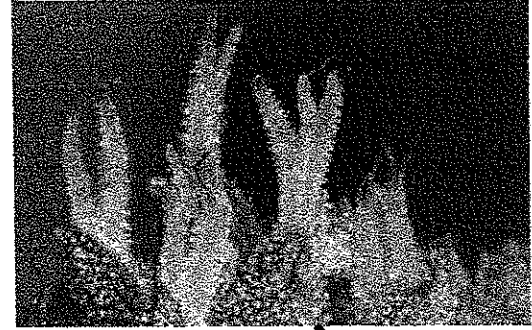
Michael Parisi
Aptos, CA

Cover Photograph

Cannabis cultivated under the Compassionate
Investigational New Drug program at the University
of Mississippi administered by the National
Institute on Drug Abuse (NIDA). Photograph
courtesy of: University of Mississippi.



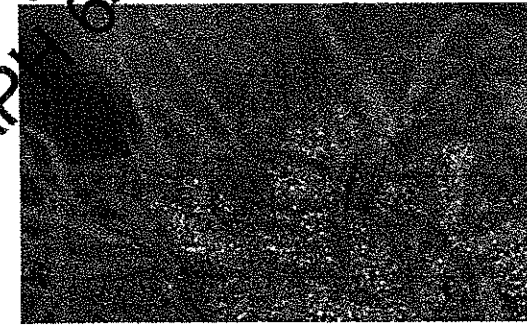
2e.



2f.



2g.



2h.

Figure 2 (continued) Botanical characteristics of Cannabis inflorescences

- 2e. Maturing female inflorescence showing young yellow styles and stigmas (often referred to as “pistils”).
- 2f. Close-up of maturing female inflorescence showing young yellow styles and stigmas senescing brown and shriveling and an abundance of glandular trichomes.
- 2g. Female inflorescence with senesced reddish-brown styles and stigmas, an indicator of inflorescence maturity.
- 2h. Close-up of female inflorescence with senesced reddish-brown styles and stigmas.

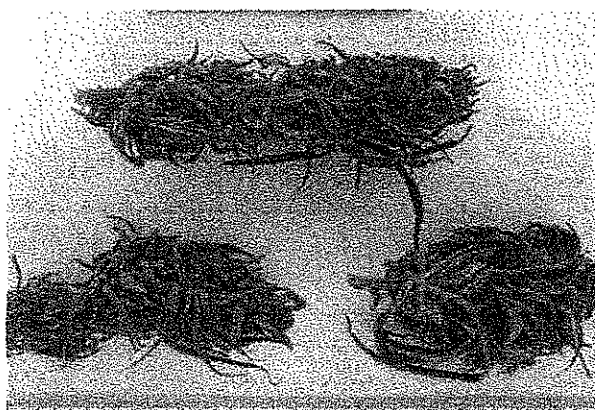
hemp, narrow-leaf drug, etc. to account for the plasticity represented in the genus.

Cannabis is a member of the *Cannabaceae* family, together with another well-known member of the family, hops (*Humulus*). The family has recently been expanded to contain 9 other genera (Stevens 2001). The following describes the published range of morphological diversity within plants recognized as *Cannabis* spp.

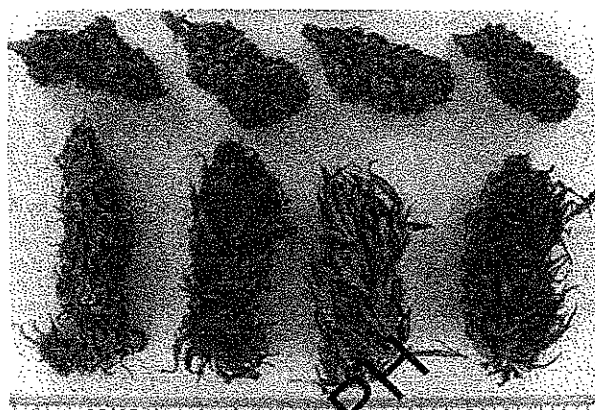
Morphological Characterization of *Cannabis* L.

Herbaceous annual, taprooted (taproot not developed on vegetatively propagated/cloned plants). Plants dioecious

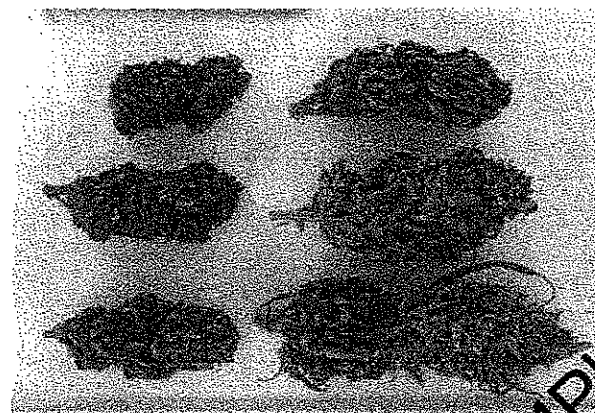
(male and female flowers occur on separate plants) and rarely monoecious (male and female flowers occur on the same plant). Monoecious plants are often referred to as “hermaphrodites.” True hermaphrodites bear bisexual flowers and are less common, whereas monoecious plants bear unisexual male and female flowers at different locations on the plant. Staminate (male) plants tend to be taller but less robust than pistillate (female) plants. Height and degree of branching depends on both genetic and environmental factors (UNODC 2009). **Stem:** Erect, furrowed, often hollow, 0.2–6 m (usually 1–3 m) tall, simple to well branched; branchlets densely pubescent; staminate (male) plants usually taller and less robust, compared with pistillate (female)



6a.



6b.



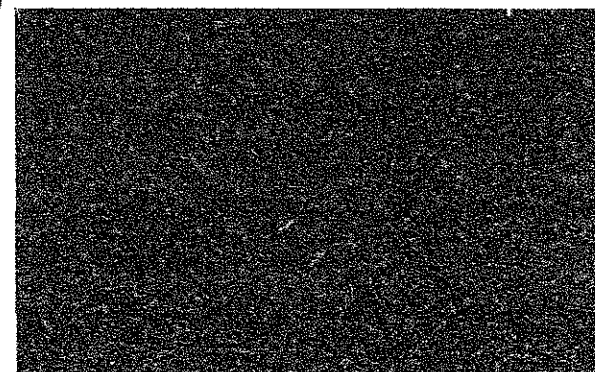
6c.



6d.



6e.

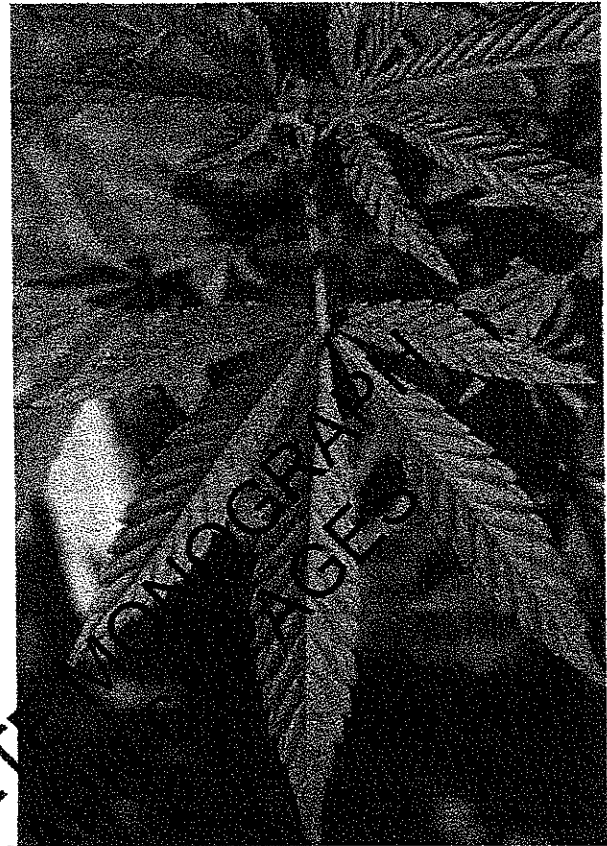
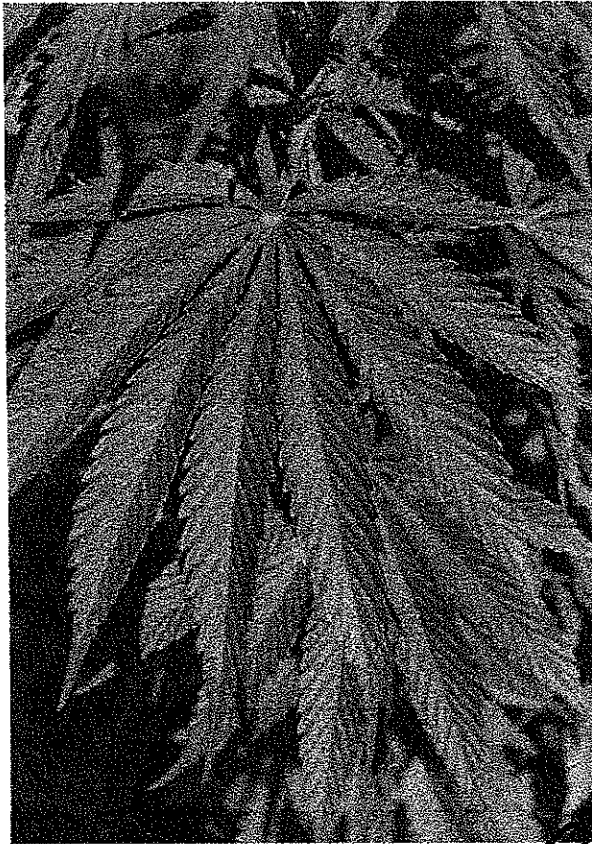


6f.

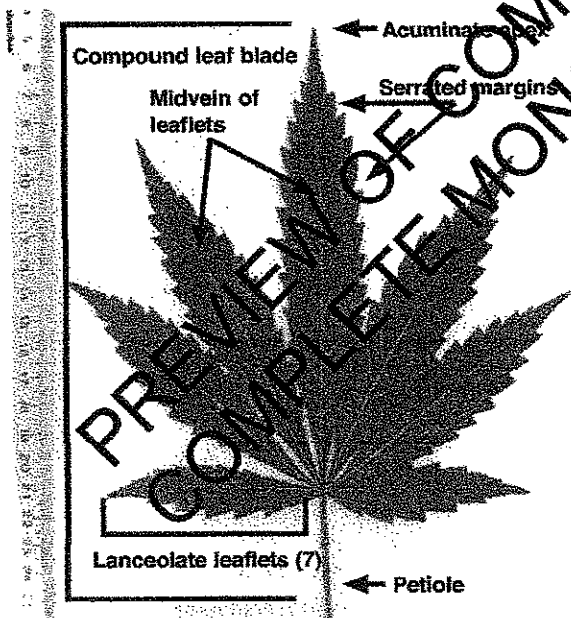
Figure 6 Macroscopic characteristics of cannabis inflorescence

- 6a. Dried, untrimmed pistillate inflorescences of morphological type "sativa."
- 6b. Dried pistillate inflorescences of morphological type "sativa" (bottom - untrimmed; top - trimmed).
- 6c. Storage effects on color of cannabis material (left - 1-year-old; right - new harvest).
- 6d. Dried pistillate inflorescences of morphological type "indica" (bottom - untrimmed; middle and top - trimmed).
- 6e. Close-up of a dried pistillate inflorescence (note the visible glandular trichomes).
- 6f. Powdered dry cannabis material (leaves and pistillate inflorescences).

Photographs courtesy of: (6a-e) WAMM, Santa Cruz, CA; (6f) University of Mississippi, University, MS.



3a.



3c.



3d.

Figure 3 Botanical characteristics of cannabis leaf

- 3a. Adaxial (upper) surface of a typical cannabis leaf (9 leaflets).
- 3b. Adaxial (upper) surface of a typical cannabis leaf (5 leaflets).

- 3c. Adaxial (upper) surface of a typical cannabis leaf with morphological characteristics highlighted.
- 3d. Abaxial (lower) surface of a typical cannabis leaf.

Natural Contaminants and Adulterants

Due to its widespread cultivation, there is little concern for adulteration of the plant itself. However, the large economic potential and illicit aspect of cannabis has given rise to a number of reported potentially hazardous natural contaminants or artificial adulterants in crude cannabis and cannabis preparations.

Natural contaminants: Several plant species have morphological characteristics comparable to *Cannabis sativa*, e.g., *Hibiscus cannabinus* (kenaf), *Acer palmatum* (Japanese maple), *Urtica cannabina* (a Asian species of nettle), *Dizygotheca elegantissima* (false aralia), *Potentilla recta* (sulphur cinquefoil, rough-fruited cinquefoil), and *Datisca cannabina* (false hemp), leading to occasional contamination of cannabis internationally (UNODC 2009). However, these plants can be readily differentiated from cannabis by inspection of their macroscopic and microscopic characteristics. More commonly, natural contaminants consist of degradation products, microbial (fungi and bacteria) contamination, and heavy metals. These contaminants are usually introduced during cultivation and storage (McLaren et al. 2008; McPartland 2002).

Adulterants: Growth enhancers and pest control chemicals, introduced during cultivation and storage, are possible risks to the producer and the consumer. There are anecdotal reports of the use of banned substances such as daminozide (Alar), the degradation product of which is the highly toxic hydrazine. Cannabis can also be contaminated for marketing purposes. This usually entails adding substances, e.g. tiny glass beads, to increase the weight of the cannabis product, or adding psychotropic substances, e.g., tobacco, calamus (*Acorus calamus*), and other cholinergic compounds, to enhance the efficacy of low quality cannabis or to alleviate the side effects of cannabis (McPartland et al. 2008; McPartland 2008).

In the Netherlands, chalk and sand have been used to make cannabis appear to be of higher quality, the sand giving the appearance of trichomes. In the UK, similar adulterations have been made by adding glass beads with a similar diameter to trichome resin heads to cannabis (Randerson 2007). In Germany, lead has intentionally been added to street cannabis to increase its weight. Lead is readily absorbed upon inhalation and this adulteration resulted in lead intoxication in at least 29 users (Busse et al. 2008). Additionally, in the Netherlands, two chemical analogs of sildenafil (Viagra) were found in cannabis samples. In the UK, other contaminants including turpentine, tranquilizers, boot polish, and henna, among others, have been reported (Newcombe 2006).

In recent years, various products laced with synthetic cannabinoids have appeared on the market. These are believed to mimic the effects of cannabis. These products are known by various names (e.g., "Spice" and "K2") and can be sold as "incense" or "natural smoking blends".

Like cannabis, these synthetic cannabinoids are schedule 1 restricted substances. The Spice blend is reported to contain synthetic cannabinoids with a mixture of otherwise legal, safe, and non-psychotropic herbal dietary supplement ingredients including: damiana (*Turnera diffusa*), Chinese motherwort (*Leonurus sibirica*), and water lily (*Nymphaea caerulea*). According to the National Institute on Drug Abuse (NIDA 2012), those using some of these various blends have been admitted to Poison Control Centers and report "rapid heart rate, vomiting, agitation, confusion, and hallucinations. Spice can also raise blood pressure and cause reduced blood supply to the heart (myocardial ischemia), and in a few cases it has been associated with heart attacks. Regular users may experience withdrawal and addiction symptoms."

Qualitative Differentiation

Cannabis that is to be used for medicinal purposes should be as free from foreign matter as practically possible (see *Limbs, Tests*). Medicinal material should be free of mold and bacteria that have a high likelihood of pathogenicity (e.g., *Aspergillus*, *E. coli* O157:H7), visible mold should be absent, material should be free of stems greater than 1.5 cm, only subtending leaves should be present, material should be free of metals to the degree allowed by a naturally occurring growing substrate, and free of pesticides and fungicides that can present a health hazard to the consumer. Microbial standards should be adopted based on those required for non-sterile pharmaceutical preparations for use by inhalation (see *European Pharmacopoeia* 5.1.4). Color should be consistent throughout each sample and should not show signs of grey or black, which are indicators of fungal infection.

For medical users of crude cannabis, there is a balance sought between organoleptic qualities (taste and aroma) and medicinal effect, as well as a balance between THC- and CBD-yielding cultivars. Many cultivators select, breed, and process for these varying qualities. For medicinal purposes an optimal ratio between total THC, Δ^9 -THC, and/or CBD has not been definitively determined. Different health conditions may respond differently to plants containing different ratios of the two primary cannabinoids. For example, there is evidence to suggest that CBD is responsible for some of the putative anxiolytic effects (Mechoulam et al. 2002; Zuardi et al. 2002) of the plant, while Δ^9 -THC has been associated with appetite stimulation (DeJesus et al. 2007; Nelson et al. 1994). The process of trimming is done both for yielding higher concentrations of Δ^9 -THC and for yielding more desirable, organoleptic qualities, since the leaves possess a sharp and bitter organoleptic characteristic. A better organoleptic profile may enhance compliance.

Dispensaries should maintain strict quality control practices to ensure the purity and quality of their material by contracting for testing with independent labs that apply independently verified testing methodologies and transparent testing

standards. Individual growers and care givers producing medical cannabis for personal use should employ good agricultural practices (GAPs) to the extent possible in all aspects of growing, harvesting, drying, and storage.

Sustainability and Environmental Impact

As all cannabis is derived from cultivated sources, there is little risk of the plant becoming environmentally threatened unless aggressive eradication programs are implemented worldwide. However, without development, implementation, and enforcement of Good Agricultural Practices (GAPs), both the indoor and outdoor production of cannabis can have significant negative environmental and social impacts. Environmentally, the illegal diversion of water, clear cutting of trees, dumping of chemicals, misappropriation of state and federal lands, and disruption of sensitive ecosystems are associated with outdoor cultivation, while high carbon emissions are associated with indoor production. In North America, especially with crops grown indoors, part of this environmental impact is driven by the illegality of cannabis cultivation that requires growers to hide crops. Others may choose indoor growing for greater control over crops and higher yields. The high-energy intensive processes associated with controlling all aspects of the indoors growing environment has been estimated to consume 1% of the national electricity use. Whether by regulation or choice, growers should apply GAPs to cannabis cultivation.

In addition to the impacts of cannabis cultivation the manufacture of butane extracts poses significant risks. A number of explosions and fires associated with butane cannabis extract production have been reported, some that have included injury. Some butane contains compounds that may not be desirable in finished products. Extraction with CO₂ (sub- or super-critical) is preferred by some and is one environmentally safe extracting option.

Documentation of Supply

For cannabis that is to be used in medicinal preparations, every aspect of cultivation, harvest, processing, and storage should be documented to the fullest extent possible. Various county and state ordinances require adherence to specific regulations that differ between locations for trade of cannabis among growers, dispensaries, and collectives. The Dutch OMC provides the following guidelines for documentation.

Security (modified from OMC 2003)

- The buildings in which cannabis is cultivated, processed, packaged and stored must be sufficiently secured, only allowing authorized personnel access to the buildings.
- Personnel involved in the production process of cannabis must be authorized for that purpose by the employer.
- Waste must be stored in such a way that the potential for theft is minimized.

a. Location of cultivation and the name of the supervising cultivator
b. Details on crops previously grown at that location
c. Nature, origin and quantity of the herbal starting materials
d. Chemicals and other substances used during cultivation, such as fertilizers, pesticides, and herbicides
e. Standard cultivation conditions, if applicable
f. Particular circumstances which occurred during cultivation, harvesting, and production that may affect the chemical composition, such as plant disease, or temporary departure from standard cultivation conditions, particularly during the harvesting period
g. Nature and quantity of the yield
h. Date or dates and circumstances of crop(s) harvesting occurred
i. Drying conditions
j. Measures for pest control

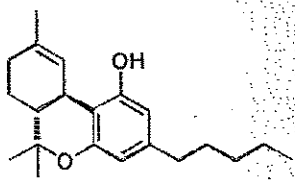
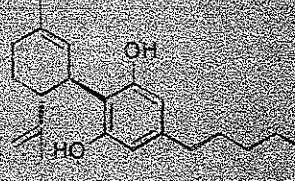
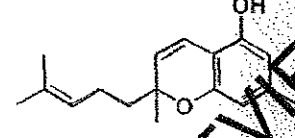
Suppliers and Dispensaries

Cannabis supplied by dispensaries should be as fully characterized as possible with traceability and a verifiable chain of custody to type of material, whether the plants were cultivated conventionally or organically, or was indoor or outdoor cultivated. Procedures should be implemented to ensure the absence of pesticides and raw material and finished product should be characterized as to its basic chemical profile (e.g., Δ⁹-THC and/or CBD content). This information should be made available to patients upon request. Dispensary personnel should be appropriately trained in how to process and handle cannabis to ensure purity, maintain quality, and to morphologically identify material. The cannabis committee of the American Herbal Products Association (AHPA) has developed a set of draft guidelines outlining recommended practices for dispensaries and cultivators to follow (AHPA 2013a), and Americans for Safe Access (ASA) has developed an industry certification program for dispensaries and cultivators (ASA PFC).

CONSTITUENTS

To date, more than 750 different secondary metabolites have been identified in cannabis. The diversity of cannabis constituents encompasses numerous phytochemical classes, notably, cannabinoids, and a host of other secondary metabolites. These other compound classes include terpenoids, non-cannabinoid phenols, nitrogenous compounds, as well as other more common plant compounds, all of which are non-psychotropic. Cannabinoids are the most studied

Table 6 Structure and activity of primary phytocannabinoids

 <p>Δ⁹-Tetrahydrocannabinol (Δ⁹-THC)</p>	<p>Primary psychotropic cannabinoid</p> <p>Activates PPAR-γ and TRPA1 at nano- and micromolar concentrations, respectively (Pertwee 2008).</p> <p>Analgesic via CB₁ and CB₂ agonism (active at ~20–40 nM) (Rahn and Hohmann 2009).</p> <p>Antiemetic (Haney et al. 2007; Hollister 1971; Machado et al. 2008).</p> <p>Anti-inflammatory, antioxidant (Hampson et al. 1998).</p> <p>Antipruritic, cholestatic jaundice (Neff et al. 2002).</p> <p>Benefits duodenal ulcers (Douthwaite 1947).</p> <p>Bronchodilatory (Williams et al. 1976).</p> <p>Muscle relaxant (Kavia et al. 2010).</p> <p>Reduces Alzheimer symptoms (Eubanks et al. 2006; Volkmar et al. 1997).</p>
 <p>Cannabidiol (CBD)</p>	<p>Non-psychotropic cannabinoid</p> <p>Anandamide (AEA) reuptake inhibitor (De Petrocellis et al. 2008).</p> <p>Analgesic (Davis and Hatoum 1983).</p> <p>Anticonvulsant (Jones et al. 2010).</p> <p>Antidepressant in rodents (Deyo and Combs 2003).</p> <p>Anti-emetic (5HT_{3A} agonist 5 nM) (Roth et al. 2010).</p> <p>Antifungal (ElSohly et al. 1975).</p> <p>Anti-inflammatory (Bong et al. 2011).</p> <p>Antagonizes effects of THC in humans (Pertwee 2008).</p> <p>Antioxidant (Hampson et al. 1998).</p> <p>Anxiolytic via 5HT_{1A} agonism (Compos and Guimaraes 2008; Resstel et al. 2009; Russo et al. 2006).</p> <p>Decrease tumorigenesis/proliferation (Bao et al. 2009).</p> <p>Effective against methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) (Appendino et al. 2008).</p> <p>Increases anandamide A2A signaling (Carner et al. 2006).</p> <p>Pro-apoptotic against breast cancer cell lines (Ligresti et al. 2006).</p> <p>Treatment of addiction (Xi et al. 2010).</p> <p>Treatment of psychosis (Russo et al. 2007).</p>
 <p>Cannabichromene (CBC)</p>	<p>Non-psychotropic cannabinoid</p> <p>Analgesic (weak) (Turner et al. 1980b).</p> <p>Anandamide reuptake inhibitor (weak) (De Petrocellis et al. 2008; Ligresti et al. 2006).</p> <p>Anti-inflammatory (Davis and Hatoum 1983).</p> <p>Antimicrobial (Turner and ElSohly 1981).</p> <p>TRPA1 agonist (De Petrocellis et al. 2008; Ligresti et al. 2006).</p>

Standards Preparations

Cannabinoid standards are dissolved in methanol at a concentration of 1 mg/mL.

Note: All cannabinoid standards utilized in the development of this method were isolated at the University of Mississippi. There is limited availability of commercially prepared cannabinoid standards.

Standards Solution Stability

CBD, CBC, and CBN are stable in methanol, both at room temperature and with freezing. Δ^9 -THC, THCV, and CBC methanolic solutions are stable only when frozen and acid compounds are only stable in a freezer. Due to their instability, acid compounds should be prepared cool and stored and shipped frozen.

Reagent Preparation

Fast Blue reagent: Dissolve 0.5 g Fast Blue B salt (MP Biochemicals, LLS) in 100 mL distilled water.

Vanillin/H₂SO₄: Dissolve 6 g vanillin in 90 mL ethanol (95%). Add 10 mL of 98% H₂SO₄. This reagent is relatively unstable and is best to use fresh each time.

Chromatographic Conditions

Stationary Phase:

C18 (UV 254) TLC plates 150 μ m, 10 cm \times 10 cm (Sorbent Technologies).

Mobile Phase:

75:25 (v:v) methanol/water with 0.1% glacial acetic acid.

Sample Application

Apply 5 μ L of the sample preparations and 2 μ L of the standards preparations on the plate as 5 mm bands 2 mm apart from each other. The application position should be 6 mm from the lower edge of the plate and at least 15 mm from the left and right edges of the plate. For visualization using both reagents, separate plates should be prepared.

Development

Line a flat bottom chamber (16 cm \times 14 cm \times 8 cm) with a filter paper or chromatography paper. Add a sufficient amount (~25 mL) of the Mobile Phase solution to ensure that the filter paper is covered with at least 5 mm of the solution, and let saturate for 15 min. Measure and mark on the plate the developing distance 60 mm from the application position. Introduce the plate into the chamber, and allow the developing solvent to reach the mark. Remove the plate and dry for 2 min at 70 °C in an oven.

Detection

Visualize the plates under UV 254 nm, then spray one set of the plates with the Fast Blue reagent and the other set of plates with the vanillin/H₂SO₄ reagent, followed by visu-

Table 7 R_f values for cannabinoid standards

Cannabinoid Standard	R _f Value
CBC	0.21
Δ^9 -THC	0.26
CBN	0.29
CBG	0.33
CBD	0.40
THCV	0.42
Δ^8 -THCA	0.61
CBDA	0.71

Note: Due to its relatively high concentration in drug type samples, Δ^9 -THC can overlap with CBN. CBN is a degradation compound of Δ^9 -THC.

alization under white light. For basic identification of the primary cannabinoids, either reagent can be used.

Results

See Table 7 and refer to the chromatograms provided (Figure 17A-C).

High-Performance Liquid Chromatography (HPLC) for the Determination of Major Phytocannabinoids in Cannabis

The LC method was adopted from Swift et al. (2013) and can be used for quantitation of THCA-A, Δ^9 -THC, CBDA, CBD, CBGA, CBG, and CBN in cannabis preparations. The method was adapted from an earlier method developed by DeBacker et al. (2009), which also quantified Δ^9 -THC. The original method of DeBacker et al. (2009) was validated for cannabis raw material and fully validated using total error approach in accordance with ISO17025 and the guidelines of the French Society of Pharmaceutical Sciences and Techniques (SFSTP). This modified and optimized method of Swift et al. (2013) was subjected to validation for selectivity, linearity, accuracy, precision, and recovery according to the US Food and Drug Administration (FDA) guidance for bioanalytical method validation (FDA 2001).

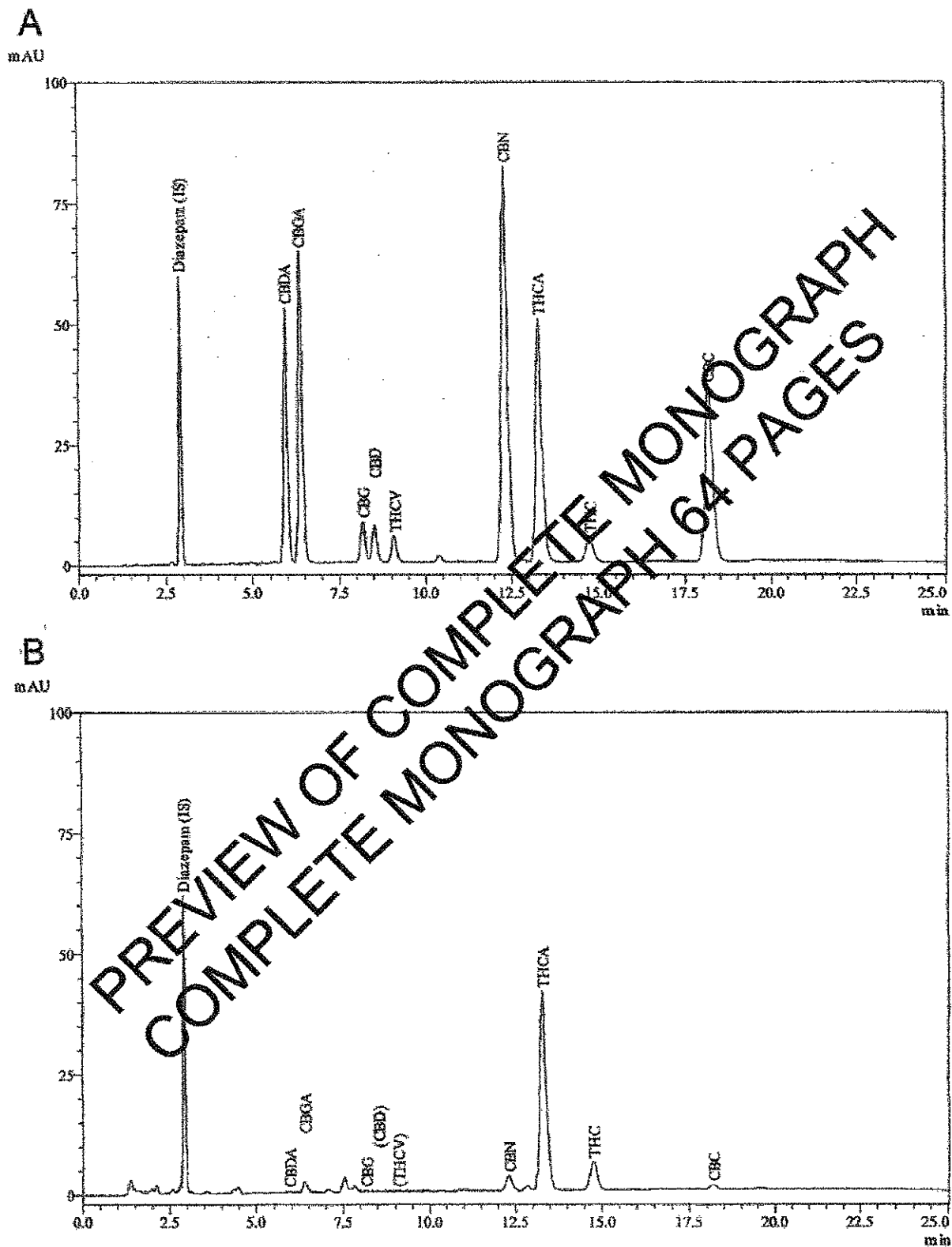
With appropriate modifications in sample preparations, the same chromatography can be used for the analysis of other cannabis materials (i.e. concentrates, extracts, foods). However, the robustness of this chromatography when applied to various matrices requires further validation (e.g., recovery, spiking experiments).

Sample Preparation

Crude Cannabis

Test samples are dried for 24 h in a 35 °C forced ventilation oven. Dried samples are ground to a fine powder. 200 mg of the sample is weighed in a glass vial and extracted with 10 mL of a mixture of methanol/chloroform (v/v: 9:1)

Figure 18 Representative HPLC chromatograms of cannabinoid standards (A at 11 µg/mL) and cannabis raw material (B)



diode array detector. For routine use, a standard UV detector is suitable.

Run time:

30 min.

Post-run time:

6 min.

Note: CBD and CBC peaks may slightly overlap if present in high concentrations (> 10%).

Quantitation

Inject each standard preparation and generate a standard curve based on the peak area vs. concentration, as a ratio of standard to internal standard.

Cannabinoid contents in the sample are quantified using the linear equation based on least squares regression for each cannabinoid compound: $(y = mx + c)$

where:

- x = concentration of the individual cannabinoid in the sample ($\mu\text{g/mL}$);
- y = peak area of the individual cannabinoid;
- c = calculated y-intercept of the calibration curve;
- m = calculated slope of the calibration curve.

Using the concentration from the equation $(y = mx + c)$, total content (C_{CBXT}) in the sample can be calculated as a sum of the concentrations of the neutral ($C_{\text{CBXT(N)}}$) and the acidic (C_{CBXA}) components. A conversion factor of 0.877 is used for adjustment of the molar masses of THCA and CBDA; a conversion factor of 0.878 is used for CBCA; both after decarboxylation. These conversion factors may not apply for other cannabinoids:

$$C_{\text{CBXT}} = C_{\text{CBX}} + C_{\text{CBXA}} \times 0.877$$

The individual cannabinoid content in the material is then calculated according to the following equation:

$$W_{\text{CBXT}} = \frac{C_{\text{CBXT}} \times V_{\text{sample}} \times D}{m_{\text{sample}} \times 10^6} \times 100\%$$

where:

- W_{CBXT} = (total) cannabinoid content in the material (% weight);
- C_{CBXT} = (total) cannabinoid content in the sample ($\mu\text{g/mL}$);
- V_{sample} = sample volume (mL);
- D = dilution factor;
- m_{sample} = sample mass (g).

Calibration Range

Linear from 2 $\mu\text{g/mL}$ to 100 $\mu\text{g/mL}$. Extrapolations from this curve should not be made; however, cannabinoid concentrations in samples greater than 100 $\mu\text{g/mL}$ can be appropriately diluted, or the curve can be extended out to 1000 $\mu\text{g/mL}$ (with seven or more points in the curve) to ensure the reading is within the calibration range.

Gas Chromatography with Flame Ionization Detection (GC-FID) for the Quantitation of Phytocannabinoids

The following GC-FID method is used for the quantitation of the major phytocannabinoids of confiscated cannabis material submitted to the University of Mississippi by the DEA and other United States law enforcement agencies as part of NIDA's Marijuana Potency Monitoring Program (ElSohly et al. 2000; Viehmann et al. 2010). Due to the high temperature of the GC injector port, in situ decarboxylation of the acidic cannabinoids occurs upon injection. This method, therefore, quantifies total cannabinoids (acidic and neutral) simultaneously. If quantitation of free (neutral) and acidic compounds is required for a specific cannabinoid, a non-destructive method, e.g., HPLC, or derivatization, e.g., silylation or formation of the alkylboronates, should be employed and validated.

Sample Preparation

Crude cannabis and hashish: To 100 mg of dried, powdered cannabis material with seeds and stems removed, add 3 mL of the internal standard solution (see below on the preparation instructions). Macerate for 1 hour at room temperature. Sonicate for 5 min. Filter the extract into GC vials, and cap the vials.

Hash oil: To 100 mg of hash oil, add 4 mL of hash oil extraction solution (see below). Macerate for a minimum of 2 h at room temperature. Sonicate for 5 min. Add 20 mL of absolute ethanol, and sonicate again for 5 min. Filter the extract into GC vials, and cap the vials.

Internal Standard Preparation (use for extraction of cannabis and hashish)

Dissolve 100 mg of 4-androstene-3,17-dione in 100 mL of 1:9 v/v chloroform/methanol mixture.

Hash Oil Extraction Solution: Dissolve 50 mg of 4-androstene-3,17-dione in 50 mL of absolute ethanol.

Chromatographic Conditions

Column:

DB-1: 15 m x 0.25 mm id x 0.25 μm film (J&W Scientific, Inc, US).

Table 10 Pesticides commonly used in cannabis cultivation

Abamectin (Avermectins 5A and 5B)	Insecticide/acaricide	LC-FLD ¹ ; LC-MS/MS ²
Acequinocyl	Insecticide/acaricide	LC/MS/MS ¹
Bifenazate	Acaricide	LC ¹ ; LC-MS/MS ²
Bifenthrin (synthetic pyrethroid)	Insecticide	GC-ECD ¹ ; GC-MS/MS ²
Chloromequat chloride	Plant growth regulator (PGR)	LC-MS/MS ²
Cyfluthrin (synthetic pyrethroid)	Insecticide	LC ² (WHO 2004); GC-MS/MS ²
Daminozide (Alar)	Plant growth regulator (PGR)	UV Spectroscopy ¹ ; LC-MS/MS ²
Etoxazole	Acaricide	GC-MS/MS ¹
Fenoxycarb	Insecticide	LC/UV ¹ ; LC-MS/MS ²
Imazalil	Fungicide	GC-ECD ¹ ; LC-MS/MS ²
Imidacloprid	Insecticide	LC-MS/MS ²
Myclobutanil	Fungicide	GC-ECD; GC-NPD ¹ ; GC-MS/MS ² ; LC-MS/MS ²
Paclobutrazol	Plant growth regulator (PGR); fungicide	LC-MS/MS ²
Pyrethrins*	Insecticide	GC-ECD ¹
Spinosad	Insecticide	LC-MS/MS; immunoassay
Spiromesifen	Insecticide	GC-MS ² ; LC-MS/MS ²
Spiridoltriamat	Insecticide	LC-MS/MS ²
Trifloxystrobin	Fungicide	GC-NPD ¹ ; GC-MS/MS ² ; LC-MS/MS ²

ECD = Electron capture detector; FL D = Fluorescence detector; GC = Gas chromatography; HPLC = Liquid chromatography; IR = Infrared spectroscopy; MS = Mass spectrometry; NMR = Nuclear magnetic resonance; NPD = Nitrogen phosphorous detector.

* Natural pyrethrins are tolerance exempt; synthetic pyrethrins are not.

Analytical Methods [RAM]) or those of the Food and Drug Administration (FDA Pesticide Analytical Manual [PAM]), should be employed when appropriate. However, as these tests were developed for commonly food products, the amount of sample needed may be prohibitive to apply to the cannabis industry. Alternatively, the food testing QuEChERS screen uses smaller quantities and may be more applicable to a variety, though not all, of cannabis products (Schoen *et al.*,²³ personal communication to AHP, unreferenced).

In the cannabis industry today, the most commonly used screening technology for organophosphates, organochlorines, carbamates, and ethylenediaminetetraacetic acid (EDTA) are immunoassays (e.g., enzyme-linked immunosorbent assays [ELISA]) and broad spectrum field tests that may or may not be validated for use on cannabis. Similarly, immunoassays for a broad range of PGRs and fungicides commonly used in cannabis cultivation are not available. Because of their relative inexpense, immunoassays are routinely used by analytical labs specializing in cannabis testing and are at high risk of not detecting pesticide residues and reporting samples to be "pesticide-free" or "non-detected".

Before commercial use, any immunoassay should be validated against a standard testing methodology.

Table 10 provides a list of the most common pesticides (including acaricide, insecticides, fungicides, and plant growth regulators) used in cannabis production.

Solvent Residues

Limits on solvents used in the manufacture of botanical products are established by the International Conference on Harmonization (ICH) (ICH 2011), with exceptions made for ethanol and acetic acid in products formulated to contain these substances (e.g., tinctures and vinegars). According to the ICH guideline, solvents are categorized in three classes. Class 1 includes known carcinogens, toxic substances, and environmental hazards such as benzene, carbon tetrachloride, 1,2-dichloroethane, 1,1-dichloroethene, and 1,1,1-trichloroethane. These are to be avoided in the manufacture of herbal and/or pharmaceutical products. Class 2 and 3 solvents (Table 12) are distinguished based on their relative toxicity level. Limits established for permissible daily exposures (PDE) are determined individually for Class 2 solvents. Limits for Class 3 solvents are set at a

REFERENCES

- Adams R, Baker BR, Wearn RB. 1940a. Structure of cannabinol. III. Synthesis of cannabinol, 1-hydroxy-3-amylo-6,6,9-trimethyl-6-dibenzopyran. *J Am Chem Soc* 62:2204-7.
- Adams R, Hunt M, Clark JH. 1940b. Structure of cannabidiol, a product isolated from the marijuana extract of Minnesota wild hemp. *J Am Chem Soc* 62:196-200.
- Adams TC, Jones LA. 1975. Phytosterols of *Cannabis* smok. *J Agr Food Chem* 23:352-3.
- Ahmed SA, Ross SA, Slade D, Radwan MM, Khan IA, ElSohly MA. 2008a. Structure determination and absolute configuration of cannabinichromonone derivatives from high potency *Cannabis sativa*. *Tetrahedron Lett* 49:6050-53.
- Ahmed SA, Ross SA, Slade D, Radwan MM, Zulfqar F, ElSohly MA. 2008b. Cannabinoid ester constituents from high-potency *Cannabis sativa*. *J Nat Prod* 71:536-42.
- [AHPA] American Herbal Products Association. 2008. AHPA adopts new trade recommendation; guidance on heavy metal, microbiological limits. Silver Spring (MD): American Herbal Products Association. Available from: <http://www.ahpa.org>
- [AHPA] American Herbal Products Association. 2013a. Recommendations to regulators: cannabis dispensing operations. Silver Spring, MD. 12 p.
- [AHPA] American Herbal Products Association. 2013b. Recommendations to regulators: cannabis laboratory operations. Silver Spring, MD. 12 p.
- Alexander T. 1987. Hepatitis outbreak linked to marijuana pot. *Sinsemilla Tips* 7:2-2.
- Anderson LC. 1990. Leaf variation among *Cannabis* species from controlled garden. *Botanical Monographs Leaflets of Harvard University* 28:10.
- Appendino G, Chances C, Tagliatacchia-Scalini C. 2011. Cannabinoids: occurrence and medicinal chemistry. *Curr Med Chem* 18:1085-99.
- Appendino G, Gibbons S, Giana A, Pagani A, Grassi G, Stavi M, Smith E, Rahman MM. 2008. Antibacterial cannabinoids from *Cannabis sativa*: a structure-activity study. *J Nat Prod* 71:1427-30.
- [ASA PFC]. 2013. Americans for Safe Access, Patient Focused Certification. Americans for Safe Access, Washington, DC; <http://safeaccess2.org/sites/patientfocusedcertification/>. Accessed 12.2.13.
- Avrahaam Y, Ben-Shoshan D, Breuer A, Zolotarev O, Okon A, Pink N, Katz V, Berry EM. 2004. Very low doses of Δ^9 -THC increase food consumption and alter neurotransmitter levels following weight loss. *Pharmacol Biochem Behav* 77:675-84.
- Banerjee SP, Snyder SH, Mechoulam R. 1975. Cannabinoids: influence on neurotransmitter uptake in rat brain synaptosomes. *J Pharmacol Exp Ther* 194:74-81.
- Barrett ML, Gordon D, Evans FJ. 1985. Isolation from *Cannabis sativa* L. of cannflavin—a novel inhibitor of prostaglandin production. *Biochem Pharm* 34:2019-24.
- Basile AC, Serjie JA, Freitas PC, Zanini AC. 1988. Anti-inflammatory activity of oleoresin from Brazilian *Capsifera*. *J Ethnopharmacol* 22:101-9.
- Bercht CAL, Lousberg RJ, Kneppers FJEM, Salemink CA. 1974. *Cannabis*. IX. Cannabicitran. New naturally occurring tetracyclic diether from Lebanese *Cannabis sativa*. *Phytochemistry* 13:619-24.
- Bercht CAL, Lousberg RJ, Kneppers FJEM, Salemink CA, de Vries FB, Van Rossum JM. 1973. *Cannabis*. VII. Identification of cannabidiol methyl ether from hashish. *J Chromatogr B* 81:163-6.
- Bercht CAL, Paris MH. 1973. Oil of *Cannabis sativa* var. *Tonique* [Cannabaceae] 68:87-91.
- Bergamaschi MM, Queiroz RH, Chagas MM, de Oliveira DC, De Martinis BS, Kapczinski F, Quevedo J, Roesler R, Schrodter N, Fardi AE, et al. 2011. Cannabidiol reduces the anxiety induced by simulated public speaking in treatment-naïve social phobia patients. *Neuropsychopharmacology* 36:1219-26.
- Bertoli A, Tozzi S, Pistelli L, Angelini LG. 2010. Fibre hemp inflorescences: From crop-residues to essential oil production. *Ind Crops Prod* 32:329-37.
- Biro T, Toth BI, Hasko G, Paus R, Pacher P. 2009. The endocannabinoid system of the skin in health and disease: novel perspectives and therapeutic opportunities. *Trends Pharmacol Sci* 30:411-20.
- Bisogno T, Hanus L, De Petrocellis L, Tchilibon S, Ponde DE, Brandi I, Moriello AS, Davis JB, Mechoulam R, Di Marzo V. 2001. Molecular targets for cannabidiol and its synthetic analogues: effect on vanilloid VR1 receptors and on the cellular uptake and enzymatic hydrolysis of anandamide. *Br J Pharmacol* 134:845-52.
- Bocsa I, Mathe P, Hangyel L. 1997. Effect of nitrogen on by means of population genetics in a monoecious hemp stand. Tetrahydrocannabinol (THC) content in hemp (*Cannabis sativa* L.) leaves at different positions. *J Int Hemp Assoc* 4:80-1.
- Boeren EG, ElSohly MA, Turner CB. 1979. Cannabiripol: a novel *Cannabis* constituent. *Experientia* 35:1278-9.
- Bolognini D, Costa R, Maione S, Conelli F, Marini P, Di Marzo V. 2010. The plant cannabinoid Δ^9 -tetrahydrocannabinol can decrease signs of inflammation and inflammatory pain in mice. *Br J Pharmacol* 160:77-87.
- Booker J, Naidu PS, Ramesh RK, Shahid GM A, Uchtmann FH. 2009. Evaluation of prevalent phytochemicals in the acetic acid model of visceral nociception. *Drug Alcohol Depend* 105:42-7.
- Born EV. 2011. Cannabidiol as emergent therapeutic strategy for lessening the impact of inflammation on oxidative stress. *Proc Rad Biol Med* 51:1054-1061.
- Bowd A, Swann DA, Turnbull JH. 1975. Photochemical transformations of cannabinol. *J Chem Soc Chem Comm* 19:797-8.
- Bronnenisen R. 1984. Psychotropic drugs. II. Determination of cannabinoids in *Cannabis sativa* L. and in *Cannabis* products with high pressure liquid chromatography (HPLC). *Pharmacol Acta Helv* 59:247-59.
- Beckell CD, Alexander C, David JC, Henterscheid WLA, Leslie AC, Malecot V, Jin X, Cubey JJ, editors. 2009. New edition of the International Code of Nomenclature for cultivated plants. 8th ed: International Society for Horticultural Science. 204 p.
- Burstein SH. 1999. The cannabinoid acids: nonpsychoactive derivatives with therapeutic potential. *Pharmacol Ther* 82:87-96.
- Busse FP, Fiedler GF, Leichtle A, Hentschel H, Stummvoll M. 2008. Lead poisoning due to adulterated marijuana in Leipzig. *Dtsch Arztebl Int* 105:757-62.
- [CAEPA] California Environmental Protection Agency. 2013. Chemicals known to the state of California to cause cancer or reproductive toxicity. Sacramento (CA): California Environmental Protection Agency. 22 p.
- Cahn RS. 1932. *Cannabis indica* resin. III. Constitution of cannabinol. *J Chem Soc* 1342-53.
- Campbell WE, Gammon DW, Smith P, Abrahams M, Purves TD. 1997. Composition and antimalarial activity in vitro of the essential oil of *Persea riparia*. *Planta Med* 63:271-4.
- Campbell WE, Guimaraes FS. 2008. Involvement of 5HT1A receptors in the anxiolytic-like effects of cannabidiol injected into the dorsal lateral periaqueductal gray nucleus. *Psychopharmacology (Berl)* 194:293-30.
- Cannell EA. 2004. The good and the bad effects of (-)-trans-delta-9-tetrahydrocannabinol (Δ^9 -THC) on humans. *Toxicol* 44:461-7.
- Carod-Artal FJ. 2003. Neurological syndromes associated with the ingestion of plants and fungi with a toxic component (II). Hallucinogenic fungi and plants, mycotoxins and medicinal herbs. *Rev Neurol* 36:951-60.
- Cacrer EJ, Auchtopach JA, Hillard CJ. 2006. Inhibition of an equilibrative nucleoside transporter by cannabidiol: a mechanism of cannabinoid immunosuppression. *Proc Natl Acad Sci USA* 103:7895-900.
- Cascio MG, Gausson LA, Stevenson LA, Ross R, Pertwee RG. 2010. Evidence that the plant cannabinoid cannabigerol is a highly potent alpha2-adrenoceptor agonist and moderately potent 5HT1A receptor antagonist. *Br J Pharmacol* 159:129-41.
- Cates WC, Warren JW. 1975. Hepatitis B in Nuremberg, Germany. Epidemiology of a drug-associated epidemic among US Army soldiers. *JAMA* 234:930-4.
- Cawthorne MA, Wargent E, Zaibi M, Stott C, Wright S. 2007. The CB1 antagonist, delta-9-tetrahydrocannabinol (THCV) has antiobesity activity in dietary-induced obese (DIO) mice. Proceedings 17th Annual Symposium on the Cannabinoids, Saint-Sauveur, QC. International Cannabinoid Research Society p 141.
- [CDFA] California Department of Food and Agriculture. 2011. Notice of quarantine and removal

September 6, 2012

Neil Allard

Nanaimo, B.C.

To: Health Canada, (M.M.A.D.)

Dear Sir /Madam,

I am enclosing an amendment for my change of production site, as well as an increase in dosage. I am in my ninth year of licenced growing. The herbs are very effective but the quantity of my production is too low due to the restricted number of plants I am allowed.

I am growing organically with very minimal yields, nowhere near ten grams per day. I have had problems with clones not rooting; plants stressed by heat, cold, and insects, and plant sickness, just to mention a few problems. Unfortunately, I have not always been able to give due care and attention to my plants because of my own health problems, the cramped production site, and a previously unsuitable home and living situation.

However, I have had a new properly built production site and I am in a home modified for a disabled person. The new production site and home will allow me to continue growing for my own needs.

I need an increase in plant numbers to allow for larger yields and to give me the flexibility to take time off and rest in between flowering my the plants. This will allow me to manage my vegetative plants more easily and also allow me to plan and pace myself with the gardening, as I must do in all other aspects of my life.

Sincerely,

Neil Allard

cc: Dr. J. Mander

cc: Jean Crowder, Member of Parliament

This is Exhibit ^mP referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo BC
this 10th day of Nov 2014

A Commissioner for taking Affidavits
for British Columbia

ALBERT E. KING, Q.C.

Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

- increase in dosage

B2-1 Information on Medical Practitioner

Medical practitioner's full name: DR. JATINDER S. MANDER

Provincial medical licence number: 27166

DR. J. S. MANDER
THE MEDICAL ARTS CENTRE
30-650 SOUTH TERMINAL AVENUE
NANAIMO, BC, V9R 5E2
(250) 753-3431

Medical specialization (if applicable): FAMILY PRACTICE

Business Address: 103 - 650 TERMINAL AVE. Suite Number: _____

City: NANAIMO Province: B.C. Postal Code: V9R 5E2

Telephone: (250) 741-0447

Fax: ()

E-mail: _____

B2-2 Medical Condition(s) and Symptom(s)

Applicant's full name: ALLARD I NEIL I VICTOR

Date of Birth: 1 / 1

Please specify the medical condition(s) and symptom(s) that are the basis for the application.

Medical Condition(s): myalgic encephalomyelitis

Symptom(s): DR. ALLARD experiences intolerable side effects with most conventional medications. Medical marijuana (cannabis) is an effective treatment for his numerous symptoms. These symptoms include muscle and joint pain, nausea, digestive problems, poor appetite, mood and sleep difficulties, fatigue, headaches, and tinnitus. These symptoms are chronic.

Note: You may wish to provide any information that you might consider useful or pertinent for the review of the application.

This is Exhibit "D" referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo BC
this 10th day of January 2014

[Signature]
A Commissioner for taking Affidavits
For British Columbia

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123

B2-3 The Proposed Daily Amount

a. The proposed daily amount of dried marijuana is less than or equal to TWENTY grams.

MLC 06/09/11

b. The following method and form of administration (please check appropriate box):

Inhalation Oral uses a vaporizer, tea, baked goods

Note to Physicians: For more information on daily amounts, you can refer to the following documents:

- Information for Health Care Professionals—Marijuana
- Daily Amount Fact Sheet

Both documents can be found on the Health Canada web site at www.hc-sc.gc.ca/hecs-secs/ocma/index.htm or by calling toll free at 1-866-337-7705.

B2-4 Duration

Under the *Marijuana Medical Access Regulations*, an Authorization to Possess may be issued for a period of up to 12 months.

If you are signing the authorization for a shorter period, please specify the number of months:

B2-5 Medical Practitioner's Declaration and Signature

Please read, sign and date the document in the space provided on Page 3.

- a. the applicant's symptom(s) listed in Page 1 of this form falls under Category 2 (symptoms that do not fall under Category 1);
b. conventional treatment(s) for the Category 2 symptom(s) have been tried or considered, and have been found to be ineffective or medically inappropriate for the treatment of the applicant.
- I am aware that a Notice of Compliance has not been issued under the *Food and Drugs Regulations* concerning the safety and effectiveness of marijuana as a drug.
- a. If you are a medical specialist that your area of medical specialization is relevant to the treatment of the applicant's medical condition; or
b. If you are not a medical specialist, please declare:
 - that the applicant's case has been assessed by a specialist;
 - the specialist's area of specialization is relevant to the treatment of the applicant's medical condition;
 - that the specialist concurs that conventional treatments for the symptom are ineffective or medically inappropriate for the treatment of the applicant; and
 - the specialist is aware that marijuana is being considered as an alternative treatment for the applicant.

(signature required on next page)

Name: NEIL ALLARD

(B2-5 continued)

Please complete the following:

Name of the medical specialist: DR. KARL MUEWDELL
The medical specialist's area of specialization: ANESTHESIOLOGY
Date of the specialist's assessment of the applicant's case: JUNE 11, 2012

Note: Under the Marijuana Medical Access Regulations, a "practitioner" is a practitioner who is recognized as a practitioner by the medical licencing authority of the province in which the practitioner is authorized to practice medicine and who is not named in a notice given under Section 58 or 59 of the Narcotic Control Regulations.

4. I declare that the information contained in this form is correct and complete.


MEDICAL PRACTITIONER'S SIGNATURE

DR. J.S. WARDEN
THE MEDICAL ARTS CENTRE
30-650 SOUTH TERMINAL AVENUE
NANAIMO, BC, V9R 5E2
(250) 753-3431

PRINT NAME

06/09/2012

DATE

IMPORTANT:

1. Please ensure that you have read and understood the declarations.
 2. Please sign and date the declarations.
 3. It is important to understand that all mandatory information requested must be provided to avoid unnecessary delays.
 4. We cannot process the application until ALL appropriate forms are received.
 5. Please retain a photocopy of this form for your files.
- If you have questions regarding this form, please contact Health Canada toll-free at 1-866-337-7705.

Name:

NEIL ALLARD



Address Locator: 69604
Ottawa ON K1G 1B9

MMAD-1792-13
Chem ID: 23

**AUTHORIZATION TO POSSESS
DRIED MARIJUANA FOR MEDICAL PURPOSES**

You have met the requirements to be issued an authorization pursuant to section 11 of the *Marijuana Medical Access Regulations* (MMAR). You are hereby authorized to possess dried marijuana for your medical purpose in accordance with your authorization. This document serves as proof of your authority to possess marijuana for medical purposes. You should have this document with you at all times when you are in possession of the substance in case you are required to show proof to the police.

HOLDER OF AUTHORIZATION INFORMATION

NAME: Neil Victor Allard DATE OF BIRTH: 25 May 1954
ADDRESS: [REDACTED] GENDER: Male
Canada
MAILING ADDRESS: 712 Hamilton Ave., Nanaimo, BC, V9R 4G6, Canada
AUTHORIZATION #: APPL-NVA-05-A00621622-54-13-A

TERMS AND CONDITIONS

The maximum quantity of dried marijuana that you may possess at any time under this *Authorization to Possess* is: 600 grams.

MEDICAL PRACTITIONER INFORMATION

NAME: Dr. Jatinder Singh Mander

VALIDITY DATE: 15 Jul 2014

The date shown as the validity date represents the last day that you may use this licence to obtain medical marijuana from a licensed producer.

EXPIRY DATE

The expiry date for your licence is March 31, 2014. At that time this no longer provides you with authorization to possess marijuana; however, until the validity date noted above, you may use this licence to register with a Licensed Producer to purchase marijuana for medical purposes. The documents you receive from your licensed producer may be used as proof that you are authorized to possess dried marijuana for medical purposes.

ISSUED BY:

Linda Smith
Acting Director, Bureau of Services and Legal
Affairs, Bureau of Alcohol Control
and Substance Abuse, 6-12000-100
Boulevard, Victoria, British Columbia
V8V 2H6
Health Services, British Columbia

DATE OF ISSUE:
15-Jul-2013

PLEASE READ ALL ENCLOSED DOCUMENTS.

ENCLOSED DOCUMENTS:

Information you should know about your *Authorization to Possess* dried marijuana and / or *Licence to Produce*.

c.c.: Dr. Jatinder Singh Mander

This is Exhibit "R" referred to by
the affidavit of Neil Allard
sworn before me at Nanaimo BC
this 10th day of Jan 2014

A Commissioner for taking Affidavits
for British Columbia

All inquiries regarding this authorization should be directed to the Marijuana Medical Access
Program toll-free number: 1-866-337-7705.

Canada

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123



Health
Canada

Santé
Canada

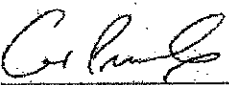
Address Locator: 0300A
Ottawa ON K1A 1B9

MMAD-1792-13
Client ID: 23

PERSONAL - USE PRODUCTION LICENCE
DRIED MARIHUANA FOR MEDICAL PURPOSES

You have met the requirements to be issued a licence pursuant to section 29 of the *Marihuana Medical Access Regulations (MMAR)*. You are hereby licenced to produce dried marihuana for your medical purpose in accordance with your licence. This document serves as proof of your authority to produce marihuana for a medical purpose. You should have this document with you at all times in case you are required to show proof to the police.

<u>HOLDER OF LICENCE INFORMATION</u>	
NAME:	Neil Victor Allard
DATE OF BIRTH:	25-May-1954
ADDRESS:	[REDACTED] Canada
GENDER:	Male
MAILING ADDRESS: 712 Hamilton Ave., Nanaimo, BC, V9R 4G6, Canada	
LICENCE #:	APPL-NVA-05-A00621622-54-13-A
<u>TERMS AND CONDITIONS</u>	
PRODUCTION SITE:	[REDACTED]
MODE OF PRODUCTION:	Indoor
PRODUCTION QUANTITIES:	The maximum number of marihuana plants that you may have under production at the production site at any time under this <i>Personal-Use Production Licence</i> is 98 PLANTS (indoor) or 0 PLANTS (outdoor) .
STORAGE SITE:	[REDACTED]
STORAGE QUANTITIES:	The maximum quantity of dried marihuana that you may keep at the storage site at any time under this <i>Personal-Use Production Licence</i> is: 4410 grams and it must be stored indoors.
<u>EXPIRY DATE</u>	
This <i>Personal-Use Production Licence</i> expires on: 31-Mar-2014	

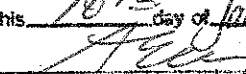
ISSUED BY:		DATE OF ISSUE:	15-Jul-2013
<small>Leads From: A Director, Bureau de santé publique A Director, Health Services Commissaire de Santé Publique Directeur des services de santé et de la lutte contre les maladies Health Canada - Santé Canada</small>			

PLEASE READ ALL ENCLOSED DOCUMENTS

ENCLOSED DOCUMENTS: information you should know about your *Authorization to Possess* dried marihuana and / or *Licence to Produce*

All inquiries regarding this licence should be directed to the Marihuana Medical Access Program toll-free number: 1-866-337-7705.

Canada

This is Exhibit 5 referred to in
the affidavit of Neil Allard
sworn before me at Nanaimo, BC
this 10th day of Jan 2014

A Commissioner for taking Affidavits
for British Columbia

ALBERT E. KING, Q.C.
Barrister & Solicitor
155 Commercial Street
Nanaimo, BC V9R 5G5
753-6617 FAX 753-6123